THE ELEMENTARY SCHOOL JOURNAL

VOLUME XXII MAY, 1922 NUMBER 9

Educational News and Editorial Comment

SILENT READING

One of the most gratifying indications of the success of scientific studies in education is to be found in the fact that school systems are beginning to turn the discoveries of the educational laboratories into practical procedures in their classrooms. In Tulsa, Oklahoma, the school officers in charge of primary education, Miss Eva M. Davis and Miss C. Mabel Smith, have issued a bulletin of fifty-six pages which is an excellent summary of scientific studies of reading and a handbook of practical advice to teachers.

The authors of this bulletin have made a clear case for the introduction of exercises in silent reading and have filled somewhat more than one-half of their monograph with practical exercises to be used by the teacher. They have also described in detail methods of detecting and remedying defects in pupils. The bulletin modestly asserts that it makes no claim to originality. It is, however, one of the most useful handbooks, if not indeed the most useful, that deals with the problems of reading.

One table which is especially suggestive will be quoted as indicating the direct empirical method which is exhibited throughout the monograph. This table, with its explanatory introduction, is as follows:

Having grouped the pupils according to their abilities in silent reading and having selected a type method to be used as a basic method in teaching reading, the next step in diagnosis is to analyze the special disabilities of individuals and groups.

According to the Anderson-Merton study the typical errors in silent reading are as follows:

	Frequency	Percentage
1. Meager meaning vocabulary	741	33
2. Inability to find essential idea	423	19
3. Omission of part of idea due to short unit of visual recognition	306	14
4. Giving general thought instead of specific answer or specific instances instead of general thought; i.e., inability to get definite information from material read	293	13
5. Inaccuracy due to carelessness or haste	90	4
6. Failure to note carefully small words or key words	95	4
7. Failure to differentiate between words similar in spelling	76	3
8. Substitution of pupil's own thought for that in paragraph	97	4
9. Inability to think logically in response to question	91	4

When individual pupils are under observation the following defects may be observed:

1. Reading word by word rather than by thought groups. (Short perception span.)
2. Vocalization and lip movement.
3. Using finger to follow line. (Improper eye movement.)
4. Short span of attention, resulting in loss of place, omission, and repetition of words.
5. Slow rate of silent reading, due partly to the fact that they have "set" that particular pace.
6. Inappropriate motor habits in making the return sweep.
7. Irregular progression of attention from left to right.
8. Failure or inability to scrutinize the words in sufficient detail to recognize significant parts.
9. Inability to analyze new words.
10. Pernicious habits of day-dreaming, dawdling, or wasting time.
11. Word-blindness or alexia.

SCHOOL BOARDS AND STANDING COMMITTEES

The public school system of the city of Washington has been for years a storm center. There are peculiar social and administrative conditions which complicate school matters in the national capital. When the present superintendent was appointed, it was recognized by the board of education and by educational adminis-

trators that a strenuous effort was to be made under the guidance of a thoroughly trained man to lift Washington out of the administrative complications that have so long hindered the development of the school system.

Superintendent Ballou has cleared up one matter after another. He has now come to one of the crucial problems of organization which is of such general importance that his efforts to cope with it will be watched with great interest.

The following extract from an article published in one of the Washington papers gives an account of Superintendent Ballou's attitude on the proposal that a series of standing committees take over the business of the board.

> The Superintendent made it clear last night that he is a subordinate of the board and does not intend to dictate to that body, but that his opposition to standing committees is based solely upon his desire to see the board function in a modern businesslike manner and with dispatch. By operating as a committee of the whole, Dr. Ballou believes the board will not accomplish this, but will facilitate matters coming before it for disposition.
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> Progressive boards of education, Dr. Ballou said, have dropped all standing committees and are functioning as a whole. Seven or eight years ago, he said, school boards were virtually operated by various committees. But today 120 or 130 of the school boards in the largest cities of the country have eliminated standing committees.
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> In his efforts to convince the board that the re-establishment of standing committees is not in keeping wlth progressive educational tendencies, Superintendent Ballou also will wage a war on the executive sessions of the board, more popularly known as the "star chamber" proceedings.
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> Dr. Ballou is of the firm opinion that 99 per cent of the business of the board can and should be transacted in public meetings. At the present time, it was pointed out, the board disposes of about 10 per cent of its business in the "dummy" public sessions, while disposing of matters which should come to the attention of the public behind closed doors.
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> Dr. Ballou's opposition to standing committees of a school board was first made in a book he wrote in 1914, while he was director of the department of educational investigation and measurement of the Boston public schools, and which was published by Harvard University.
>
> "Whatever one's assumption may be concerning the legal power or general influence of a standing committee," Dr. Ballou said, "a careful study of its work in the light of effective school administration can lead only to the inevitable conclusion that the committee form of organization of the board of education is based on erroneous conception of the functions of the board and of the proper method of discharging them.

"My contention is based on the following propositions:

"1. The small standing committee is likely to play a disproportionately large part in the transaction of the board's business.

"2. The committee form of organization increases materially the opportunities for the exercise of pernicious influences.

"3. The committee system of organization violates four fundamental principles of effective school administration: (*a*) the duties of the separate committees of the board cannot be so defined that overlapping of authority is avoided; (*b*) therefore the responsibility of each committee cannot be adequately fixed; (*c*) hence the accountability of each committee cannot be insisted on; and (*d*) the committee system tends to confuse lay control with professional and executive management.

"The public schools belong to the people. The people should control the schools through some agency created directly or indirectly by the will of the people.

"It is the business of this lay board to exercise general control over the school system and to determine educational policies. The professional and executive management should be delegated by the board to those professional educators of its own selection whose education, training and experience qualify them to direct and manage a system of public education. The committee system interferes with this differentiation of the functions of the board and its professional officers in that a large part of the work delegated to every committee of the board is executive work which should be performed by executive officers. It is difficult, if not quite impossible, to maintain this essential division of labor between the board and its officers under the committee system of organization."

RURAL SCHOOL LEAFLETS

The Bureau of Education has commenced the publication of a series of leaflets dealing with the problems of rural schools. This is a part of the new commissioner's policy of emphasis on the national problem of improving conditions in the one-room country school.

The Bureau of Education is prepared also to issue to communities for use in connection with these leaflets lantern slides and films showing in a concrete way what has already been accomplished along the lines advocated in the text of the leaflets. For example, the first leaflet is on *School Consolidation*, and the second is on *Transportation of Rural Pupils*. Slides and films have been prepared on each of these topics.

The third leaflet, not yet issued but shortly to come from the press, is on *A Rural Teacher's Library*. The material which is

offered by the Bureau in this connection is a series of lists of books and advice as to methods of securing the books.

In ordering these publications reference should be made to the Rural School Leaflets.

SOCIAL STUDIES IN THE SCHOOLS

The following editorial, entitled "A Step Forward in Popular Education," appeared in the *Chicago Daily Tribune:*

The introduction of a course in elementary economics and social service in the grammar schools is a belated but most welcome step now to be taken by our local school authorities. Mr. Mortenson is to be congratulated that his record as head of the Chicago public schools is to include such an innovation.

The course has been laid down by educational experts of the University of Chicago and the head of the department of economics, Professor Marshall, and therefore promises to be practical. We see no reason why the elements of economics and the basic principles of our social organization should not be taught in the upper grammar grades. They are not beyond the capacity of youth; and if they are not taught in the grammar schools, the large proportion of our young people who do not reach the secondary schools will miss them altogether.

This is a very serious omission in our system of popular instruction. Its effects are shown in a pervasive ignorance of matters of vital importance to our well-being. It gives the demagogue and the quack an undue advantage and makes us the victims of persistent fallacies in legislation and public action. Progress is retarded by repeated blunders from which a knowledge of the elements of economics and of our social order would save us had we been well grounded at school. There is nothing abstruse about these elements any more than those of arithmetic and geography, and a knowledge of them will give tests of public action which our public now lacks.

Responsible newspapers will especially welcome this new course of instruction, for there is nothing clearer in journalistic experience than the difficulty of directing public opinion which has no sound foundation in elementary knowledge. When we, men and women who are the public, have passed beyond school age and are preoccupied with the business of getting a living, we have little time for catching up with the omissions of our schooling, and it takes a lifetime to pick up, as we must here and there, the knowledge of the laws and forces which govern our affairs. In this state we are open to any gust of prejudice or any passing pressure of fancied interest. We have no sound standards, and the exposition or exhortation of the press, even such as is disinterested and sincere, finds little response.

It is the function of a democratic school system to prepare youth to go into life with at least a rudimentary equipment of knowledge of the laws

which govern our economic and social activities. And we are confident that this equipment can be supplied by the public schools.

JANITORIAL SERVICE BY CONTRACT

The Board of Education of Cincinnati has had in years past the harassing experiences which many other cities have had with school janitors. During the war period and immediately following, the demands for wages became, as the Board believed, excessive. Not only so, but the janitors were difficult to control because they used the power of a very compact organization to secure their own way in the handling of the buildings.

In the midst of these difficulties the superintendent hit on a plan which has worked with the highest degree of success. A contractor was found who undertook for a fixed sum daily to care for all of the buildings of the city. This contractor has a force of men who are specialists. There are, for example, expert window-washers, and there are expert grass-cutters. These squads make the circuit of the buildings periodically and perform at each building the services of their special type. There are various ranks of expert engineers who supervise the heating of the buildings.

The Board of Education has nothing to do with the details of the organization. The squads of workers move about under the directions of the contractor. He works under an agreement which makes him responsible for the full care of the buildings. If the specifications are not lived up to in any respect, the Board of Education deals with the one man.

The plan is not only successful in keeping the buildings in better condition than ever before, but also very economical as contrasted with the old method of dealing with individual janitors. Indeed, the superintendent was recently able to announce that the continuation of the plan next year will be under financial conditions even more favorable to the schools.

The announcement in the *School Index* is as follows:

A large part of the meeting of the Board of Education last Monday afternoon was taken up with the opening and reading of bids for janitor service in the schools. There were many individual bids, some for one school and others for two or more. The bid of Mr. W. S. Bray of $783 a day for seventy-six schools, is apparently the lowest bid. The present contract held by Mr.

James M. Sprague is $1,002 a day. Figuring on the acceptance of Mr. Bray's bid, it is estimated that $38,000 can be saved in this calendar year, which would permit operation of the schools for two days.

It is hoped that an additional saving over last year may be made through the receipt of lower bids for coal and because less coal will be required than last year due to the mild winter. It is therefore not beyond possibility that another day or two may be added in September.

THE JUNIOR HIGH SCHOOL ABANDONED AT FORT WAYNE, INDIANA

For twenty-five years we have had in Fort Wayne thoroughly departmentalized intermediate schools, consisting of seventh and eighth grades, grouped into five or six units of 160 to 400 pupils each. The teachers in these schools were for the most part middle-aged women who had been transferred from the elementary grades without any particular preparation for special work. None were college graduates; few had even so much as two years of normal training. The principals were for the most part teachers who had been promoted from the grades. About one-half had done considerable normal and college work in education. About 75 per cent of the school week was spent upon English, history, geography, and arithmetic, the remainder divided among manual training, domestic science, art, music, and physical education. (Query: Is this type of organization a junior high school? I judge that at least 60 per cent of the so-called junior high schools are no more than just this sort of intermediate school.)

I was a teacher in the high school here for eight years, coming into close contact with children entering from the eighth grade. For five years following I was principal of the high school, with a fine opportunity of knowing the capacities of these children as revealed in their ninth-grade work. We were pretty well satisfied with the intermediate school. The failures in the ninth grade were consistently fewer, subject by subject, than the averages over the country. The pupils were good workers; morale was high; disciplinary problems were few and not serious. The transfers from the eighth grade to the ninth grade in those thirteen years never fell below 88 per cent, were often 94 per cent, and averaged 92 per cent.

Then came the establishment of the so-called junior high school. With no change in principals, no change in teachers except for

additions to the faculties, inconsiderable changes in equipment and building arrangements, there was added to the curriculum described: Latin (elective but practically forced upon all the brighter children), typewriting (elective), millinery, general science, printing (elective), auditorium, "junior high mathematics" (substituted for arithmetic), and various forms of extra-curricular activities. The children were receiving school grades in fourteen to sixteen subjects of instruction. In the high school the results were reflected with the first class attempting the "enriched" curriculum. All departments reported a loss in ability of entering pupils to concentrate upon the subject in hand, a loss in ability to work, a looseness of morale, and a failure in reasonable discipline which we had not heretofore known. And these failures increased progressively from year to year. Rightly or wrongly we attributed most of this decline to the overcrowding of the curriculum in the seventh and eighth grades—a position in which we were strongly supported by many parents who were alarmed by the apparent superficiality of their children's attainments. When to these conditions we were compelled to add the undeniable facts that our ninth-grade enrolments showed no perceptible gain and that the per capita cost of instruction in the junior high schools approximated the cost of the high schools, it seemed wise to us to return to the simpler type of intermediate school. This we have done, retaining only the general science and auditorium work, both materially reduced in time allotment and in content. We shall know within two or three years whether or not the reversion to the simpler organization will cure our evils. Until we shall have had opportunity to judge, we shall go on in the way which we formerly found safe.

Before we shall be ready to commit ourselves to the junior high school movement we shall wish certain information upon three matters which do not seem certain today. We wish to know, first, that the ninth-grade child, fourteen and one-half years of age, is more closely allied psychologically and socially with the seventh-grade child, twelve and one-half years of age, and the eighth-grade child, thirteen and one-half years of age, than he is with the tenth-grade child, fifteen and one-half years of age. Our impression is

that he is not; but we shall hold our impressions subject to correction in the presence of reliable data. Second, if such closer alliance can be established, we shall wish to know with certainty that the widely diversified curriculum with wavy electives is better for the mental growth of the child than the simpler, more compact courses. (Query: Is not the present tendency in college and high school to restrict the use of electives and to reduce the number of subjects of instruction? Is it likely that the child of twelve or thirteen will be wiser in elections than the older student in high school and college? If four subjects constitute a "rich" enough course for high school and three or four for college, are not fourteen or sixteen too heavy a diet for little children?) We shall wish to assure ourselves, further, that the drill phase of education can be completed by the end of the sixth grade or even the seventh grade. Judging from the abysmal ignorance of the usual ninth-grade child in such matters of drill as spelling, arithmetic, geographical facts, elementary grammar, etc., we fear that to terminate drill work with the sixth grade will only leave confusion worse confounded.

Finally, we believe that the safety of this republic demands that its citizen body shall possess a great fund of *common* knowledge upon which to rear a national fabric. We cannot believe that this common fund can be accumulated in six years of school. We do believe that not less than eight years, possibly even more, should be devoted to that work. Thus believing, we think it unwise and dangerous to urge children into elections and differentiations at an age so early that sane and mature judgments are wholly impossible.

L. C. WARD
Superintendent of Schools
FORT WAYNE, INDIANA

SCHOOL MAGAZINES

The editors of the *Elementary School Journal* are asked from time to time to recommend educational periodicals for school libraries. They have never been able to give a better answer to such an inquiry than that published in *School Topics*, the school publication of the city of Cleveland, which is reproduced in full as follows:

American School Board Journal—Bruce Publishing Co., Milwaukee, Wis. Contains articles on administration of schools. Most valuable for the plans and illustrations of new schools which appear in each number. Architects find these helpful.

Education—Palmer Co., 120 Boylston St., Boston, Mass. Devoted to the science, art, philosophy, and literature of education. September, 1921, number contains good articles on home furnishing in the junior high school.

Educational Administration and Supervision—Warwick and York, Baltimore, Md. Edited by W. C. Bagley, W. W. Charters, Lotus D. Coffman, Alexander Inglis, David Snedden, George Strayer. Its field is state and county systems including rural education and educational legislation; city school systems including problems on administration and supervision.

Educational Review—Educational Review Publishing Co., Garden City, N.Y. Discusses important problems of the day in all fields. Has a new feature, the portraits of prominent educators.

Elementary School Journal—Department of Education, University of Chicago, Chicago, Ill. One of the best educational periodicals devoted to elementary education. Gives practical, definite aid to the teacher. Articles are by authorities and represent the forward steps in education.

Journal of Educational Psychology—Warwick and York, Baltimore, Md. Devoted primarily to the scientific study of problems of learning and teaching. Contains the latest and some of the best available material on educational tests and measurements. Written for the psychologist.

Journal of Educational Research—Public School Publishing Co., Bloomington, Ill. Official organ of the National Association of Directors of Educational Research. Treats of same subjects as the *Journal of Educational Psychology*, but in a more popular way. Its object is to popularize and make known the problems and results of tests and measurements to teachers and laymen.

Kindergarten and Primary Magazine—Manistee, Mich. A guide book in child training. Gives practical hints and definite suggestions for the kindergartner and first-grade teacher. One of the best periodicals of its kind.

Normal Instructor and Primary Plans—F. A. Owen, Dansville, N.Y. Gives practical suggestions for the first six grades. Contains cut-out figures, a sheet of pictures for picture study, suggestions for holiday decorations, etc. Specially helpful for the teachers in rural schools.

School and Society—Science Press, Garrison, N.Y. A weekly publication. Interested in all phases of modern education. Always contains some worthwhile contribution from a well-known educator. Has timely notes on current problems.

School Review—Department of Education, University of Chicago, Chicago, Ill. One of the best periodicals devoted almost entirely to the problems of the high school. A periodical every high-school teacher will be interested in.

Teachers College Record—Teachers College, Columbia University, New York City. Quarterly publication. Contains articles by authorities on many phases of education.

English Journal—University of Chicago Press, Chicago, Ill. Although written for the teacher of English, it contains many articles of general interest.

Journal of Geography—2249 Calumet Ave., Chicago, Ill. The official organ of the National Council of Geography Teachers.

Journal of Home Economics—American Home Economics Association, Baltimore, Md. "For those interested in homemaking, institution management, and educational work in home economics."

Manual Training Magazine—Manual Arts Press, Peoria, Ill. Devoted to the manual arts in vocational and general education.

School Arts Magazine—School Arts Magazine, 26 Foster St., Worcester, Mass. "An illustrated publication for those interested in art and industrial work." Contains many suggestions for the art teacher. Each number is profusely illustrated.

THE PROVIDENCE BANK OF HEALTH

The city of Providence, Rhode Island, has a plan for encouraging the cultivation of health habits among the school children of the city which consists in keeping from day to day in account books supplied to the pupils records of their efforts to conform to a set of health rules. The first two pages of the account book set forth the plan in the following statements.

The Province Bank of Health is a plan to improve the health of school children and to teach them correct health habits.

Each schoolroom which adopts this plan becomes a bank of health.

Each bank has a president, a head cashier, an assistant cashier, and a receiving teller for each row.

The teacher is the president.

The other officers are selected from among the pupils. The president appoints the officers for the first week, but after that they are appointed in the order of their credits in their pass-books, the one receiving the highest number being made head cashier, and so on.

Every morning deposit slips will be given to the pupils on which they will mark with an x the rules they have kept on the preceding day. The tellers will collect these and enter the credits in the bank book. A blue pencil star for each rule observed.

Every Friday the assistant cashier will add the total credits, and the head cashier will place stars in the books as follows: A red star for 30 points, a green star for 40 points, a silver star for 45 points, and a gold star for 50 points or over.

Report blanks will be supplied so that the president of the bank can make a report of all deposits for the entire term, this report to be mailed at the end of the term to the Director of Physical Education, School Department, 9 Exchange Terrace, Providence, Rhode Island.

HEALTH RULES

(*Stand up straight; sit up straight*)

1. Sleep ten hours with windows open.
2. Brush the teeth the first thing in the morning and before going to bed at night. Use tooth powder or tooth paste at night.
3. Wash face and hands, neck and ears, brush and comb hair, and clean finger nails before breakfast.
4. Eat a good breakfast (fruit, cereal, milk, bread and butter, and egg).
5. Exercise in the open air two hours a day.
6. Take five deep breaths of fresh air three times daily.
7. Wash hands and face before each meal.
8. Take a hot bath at least once a week.
9. Daily attention to toilet.

The following notes explain and amplify the foregoing rules:

Rule 1. For children under twelve; nine hours if over twelve.

Rule 2. If possible, brush the teeth also after each meal.

Rule 3. It is desirable that the face and hands be washed before every meal.

Rule 8. A hot bath twice a week is better than once a week.

Note.—Ask your parents to take you to the doctor or dentist when the school doctor or school nurse finds anything the matter with you.

News Items from the School of Education of the University of Chicago

SUBSIDIES FOR INVESTIGATIONS

Educational films as regular equipment for use by teachers, moving pictures as substitutes for books and lectures in schools and colleges, and lantern slides as substitutes for maps and charts have recently been brought to public attention by a number of commercial firms. Journals have been established to persuade parents and school officers that visual education is the coming form of teaching. In order to secure some carefully balanced judgments in regard to the value of these visual devices in teaching pupils, the Commonwealth Fund, of New York, has given Professor Freeman, of the University of Chicago, a subvention of $10,000 to conduct a systematic study of the educational value of various kinds of pictures. Professor Freeman recently read a paper before the Educational Research Association which showed that many of the claims of film exploiters are ill founded in fact. The Educational Research Committee of the Commonwealth Fund decided that the problem which Professor Freeman and his assistants have been investigating is of such importance and general interest that funds should be supplied for a thorough investigation of the whole matter.

Professor Judd, of the School of Education, and Dean Marshall, of the School of Commerce and Administration, secured a subvention of $14,000 from the same source for use in collecting and trying out in schools materials of instruction in the social sciences suitable for the upper grades of the elementary school and for high-school classes.

SUMMER QUARTER COURSES

Summer courses in the Geography Department will be given by Edith Parker and by George J. Miller, a visiting instructor

from the State Teachers College, Mankato, Minnesota. Mr. Miller is editor of the *Journal of Geography*. To meet the special needs of elementary and junior high school teachers of geography, Mr. Miller offers each term a course entitled the Organization of Geographic Problems, and Miss Parker gives each term a course dealing with the Technique of Teaching Geography in the Grades. These courses discuss concretely and in detail the selection and effective presentation of geographic materials in Grades III–IX inclusive.

For supervisors, principals, and superintendents, Investigations of Problems in Geography is offered by Miss Parker. It is concerned with such problems as the supervision of geography teaching, tests, the evaluation of texts, and the reorganization of geography curricula. Mr. Miller's course, Problems of Geographic Instruction in Normal Schools, is designed for normal-school instructors in geography and treats in detail the special problems that arise in this important field of geographic instruction.

The courses in mathematics for the Summer Quarter are planned particularly for teachers and supervisory officers in elementary schools, high schools, and teacher-training institutions. The courses will canvass the recent literature and summarize the most significant outcomes of recent experiments, movements, and tendencies in the technique of teaching and supervising mathematical studies. Recent findings of investigations in the laboratory schools of the University of Chicago will be included. The course in supervision by Mr. Breslich, offered for the first time as a summer course, will include much new material and many new points of view on the problems of supervising mathematics instruction. It cannot fail in its appeal to teachers and other school officers who are struggling with the problem of improving teaching in mathematics.

Detailed information concerning summer courses can be secured from the Summer Quarter Bulletin, which will be sent on request.

MAKING THE COURSE OF STUDY

RUBY MINOR
Supervisor of Instruction, Anderson, Indiana

Teacher participation in the revision of the course of study is now generally recognized as an essential feature of democratic administration in our public school systems.

How to secure the maximum of teacher participation, with economy of time and effort, and at the same time maintain high standards of educational theory and practice, is the threefold problem which confronts a progressive administration.

The suggestions offered in this paper are made not from the viewpoint of self-satisfaction or with the idea that perfection of attainment has been achieved, but with the hope that the efforts of our staff may be of service to others in the endeavor to lift the grade teacher above the plane of drudgery by giving an opportunity for larger service.

It is the opinion of the writer that much of the difficulty in getting a hearty response from a large staff of teachers in the revision of the course of study is often due to a lack of sufficient and systematic preparation. This does not refer to professional preparation for teaching, although that is of obvious significance, but rather to that special preparation of teachers in service which makes the immediate task seem personal and worth while.

It seems to be a prevailing opinion that a supervisor must be in a new position some little time, say a year, before attempting any large work of an unusual nature. The writer has found that any group, however new the conditions, will follow a leader who has definite ideas and systematic methods of procedure. Tactful, the supervisor should be; sympathetic, he must be, and unafraid. He who expects large results and manifests efficient leadership will usually realize his expectations.

In attempting to secure maximum participation on the part of teachers it is reasonable to assume that they are not unlike the

majority of people—their interest must be awakened and maintained. They must be able to see the need of co-operative endeavor, and they must be permitted to proceed along democratic lines if their work is to assume the dignity befitting a professional pursuit.

Believing that the surest way of realizing one's needs is to take an inventory of one's ideals, the supervisor began the year with a discussion of a few of the most important educational principles. Not knowing her staff, she assumed that any body of teachers assembled in the first meeting of the year would be helped by a brief recall of fundamental concepts. In the stress of beginning school even the greatest inspiration may become shadowed by routine and lose its force. Each teacher was therefore given a bulletin which summarized briefly the thoughts of the day's discussion. Space will not permit the reproduction of this bulletin, but since such bulletins formed a large part in the scheme of the year's work, an outline of this bulletin by questions is here given.

GENERAL INTRODUCTION

1. What should be the largest purpose in the mind of each teacher for her pupils this year?
2. What constitutes genuine, whole-hearted participation by every member of the teaching staff?
3. How may we recognize and capitalize unusual ability wherever it appears?
4. How can we standardize our system of procedure and yet secure real professional growth?
5. What is the teacher's responsibility in the making of the course of study?

FUNDAMENTAL CONCEPTS

1. What is individualism? Why encourage it?
2. What is social consciousness? Why encourage it?
3. What is initiative?
4. How may initiative be developed in pupils?
5. What is motivation? What is its value?
6. What dangers are to be avoided while attempting to secure these desired goals?

The questions listed were discussed, not with any desire to overwork educational terms, but to give new meaning, if possible, to these much used terms and to make possible a foundation which

might serve to unify our efforts during the year. The success of the year's work makes it possible to say that the means were well chosen.

As the surest way to secure confidence in teachers is to show confidence in their sincerity and ability, something definite was planned for each teacher to do for the October institute. The following outline is self-explanatory. The teachers were requested to make detailed reports and to have questions in mind for the discussion.

I. Note examples of individual differences in your room:
   1. Physical
   2. Mental
   3. Moral and social
   4. Home environment
   5. Others

II. List various ways in which you adjusted conditions to meet these needs

III. List various means of motivation which you have used in
   1. Reading
   2. Language
   3. Spelling
   4. Other subjects

It is obvious that the teacher who kept the foregoing items constantly in mind during the first month of school was keenly alive to conditions in her room at the very beginning of the semester; thus economy of time and effort was secured. She was also stimulated by a sense of responsibility in meeting her difficulties and by a feeling of co-operation as she shared her experience at the next meeting.

So far this discussion does not seem to have an immediate bearing upon the making of a course of study. It must be borne in mind, however, that the average teacher has not been trained to recognize her function in the making of a course of study. It is safe to say that many teachers consider the course of study as a ready-made document to be furnished by "the powers that be," as any other supplies of the school are furnished, without much thought as to where it originated or as to its value. It is not strange that the average teacher has this attitude since for decades past the chief author of the course of study has been the superin-

tendent or supervisor, and the teacher's duty has been to accept dictation from above.

The procedure outlined served three purposes: (1) It gave each teacher definite suggestions to guide her work and resulted in greater efficiency. (2) It gave unity to the various educational concepts that must of necessity vary greatly in a group of eighty-five teachers who differ in amount, kind, and recency of training. (3) It furnished data for discussion as to what should be included in a course of study.

It was agreed that the contributions on motivation would be helpful to any teacher; therefore, they should be printed as a chapter in the new course of study. Two committee members were appointed by each group to represent them in the organization of this material on motivation. Some of the contributions were of greater excellence than others, but the committee on organization was advised to be generous in judging, since the success of the initial effort was important as a stimulus to enthusiasm. The work of organizing was not easy as almost every member of the staff had contributed something, and there was much repetition. It was decided, in order to have as large representation as possible, that those teachers offering the smallest contributions should receive credit and that the same contributions should be eliminated from the list of the teacher who offered many suggestions. In a way, this was not fair to those who worked to contribute generously, but the generous contributor is usually the most capable and is much less sensitive to discouragement.

The supervisor worked as a member of every committee, but the greatest freedom of discussion was encouraged in order to capitalize the available talent of the entire staff. All committee meetings were one hour in length and were held at the close of the afternoon session, one-half hour of school time being taken and the committee members giving one-half hour of their own time. This distribution of time was thought to be a fair beginning in a community where committee work was an innovation and had not as yet proved its worth.

While this committee was at work the interest of the entire staff was held by a discussion of another bulletin. This bulletin

was headed "Suggestions for the Making of a Course of Study." It consisted of brief, concise, and illuminating quotations on curriculum-making from four leading educators. Then followed pointed suggestions from various authors bearing upon the subject. The following extract indicates the general plan and purpose of the bulletin.

THE COURSE OF STUDY

I. What and why
  1. Aims
    a) General aims for the subject
    b) Specific aims for each grade
  2. A core of minimum essentials
    a) To provide for citizenship in a social group
    b) To provide for desirable habit formation
  3. Sociological basis
    a) General field of work in the subject
      (1) Emphasis upon the most salient elements
      (2) Optional elements
    b) Variables should be considered
      (1) Local conditions studied to meet community needs
    c) Facts of curriculum should bring out social conditions which will contribute to moral training

II. How and when
  1. Psychological adaptation
    a) Subject-matter and method best adapted to age and experience of child.
      (1) Attention to technique and principles of teaching appropriate for each grade
    b) Provision made for individual differences

It is hoped that the foregoing suggestions may prove helpful in directing our discussions and our efforts in compiling a course of study. It is obvious that there is some overlapping of ideas presented in the various outlines; but this only serves to emphasize their importance. It is believed that these suggestions embody the latest views of many of our most thoughtful educational leaders and are worthy of extended study.

Obviously it was necessary to supplement this bulletin by group discussion in order that each teacher might grasp the essentials of the working principles. A part of each monthly institute session was devoted to a discussion of the making of the course of study. As a further aid to teachers the following books were sent to each

of the ten ward buildings as the nucleus of a professional library for teachers:

Bonser, *The Elementary School Curriculum*
Charters, *Teaching the Common Branches*
Chubb, *The Teaching of English*
Dewey, *Democracy and Education*
Driggs, *Our Living Language*
Jessup and Coffman, *The Supervision of Arithmetic*
Kendall and Mirick, *How to Teach the Fundamental Subjects*
Klapper, *The Teaching of English*
McMurray, *How to Study*
Rapeer and others, *Teaching Elementary School Subjects*
Sheridan, *Speaking and Writing English*
Strayer and Englehardt, *The Class Room Teacher*
Strayer and Norsworthy, *How to Teach*
Wilson and Wilson, *Motivation of School Work*

It will be noted that books bearing on the teaching of literature and English were most numerous. This was intentional as our emphasis for the year was to be upon these subjects. Other books were added as work progressed.

The teachers were encouraged to participate more largely in the making of the course in reading and penmanship. During the second semester the time seemed favorable for launching the largest work of the year—the construction of a course of study in language. A committee of nine was appointed and was instructed to come to the first meeting ready to discuss general and specific aims in the teaching of English.

The supervisor acted as chairman at each meeting. After the contributions were discussed the written suggestions were turned over to one member for further organization and the committee considered different lines of language work in the grades. As a result of this discussion it was decided to organize the course around the following topics:

I. Conversation
II. Stories
III. Poems
IV. Fables
V. Dramatization
VI. Picture study

VII. Letter writing
VIII. Business forms
IX. Composition
X. Creative effort
XI. Technique

In order to interest the entire staff, the following bulletin was distributed to all grade teachers for consideration and discussion. Almost every teacher in the corps responded. As several teachers selected the same problems the committee assembled all contributions under the original titles.

ENGLISH

Topics to be discussed at institute, March 26, 1921.

Each teacher will please write and hand in a discussion of one topic.

1. How to take advantage of the spontaneity and naturalness of expression in children entering school.
2. How to develop the feeling for good English.
3. Methods of developing the children's vocabulary.
4. Proper ways of motivating the work.
5. Correlating the work in English with the other subjects in the curriculum.
6. The relation of oral to written work in the various grades.
7. In what grade should written work be introduced?
8. The successive steps in passing from oral to written work when the latter is first introduced.
9. How to introduce the purely formal phases of language work—punctuation, capitalization, etc.
10. How to introduce the use of the paragraph.
11. The purpose and relative value of copying, dictation, and reproduction exercises.
12. How to prevent the purely formal phases of language work from interfering with the thought phases.
13. How may pupils be made conscious of their language problems without destroying spontaneity of expression?
14. Prevention vs. correction of mistakes in oral and written English.
15. Correction of oral and written English.
16. Suggestions for securing variety and facility in expression.
17. Relation of English grammar to composition.
18. In what grade should English grammar be introduced?
19. What should be the nature of the exercises in English grammar in grades below the seventh?

The discussion of the foregoing problems occupied the main portion of the March institute. At this time all teachers were

asked to send to the committee examples of motivation in language which they had found helpful. These contributions were later organized as one chapter of the course of study.

The entire staff had concentrated on a better speech campaign early in November. Each teacher had been requested to write an outline of her procedure for the week and to describe in detail any original contribution in the way of plays, slogans, or other work of interest by the pupils. All of this material was now ready for the language committee to prepare for printing. It was the unanimous opinion of the committee that a course of study should tell *how* to teach as well as *what* to teach, so this phase received considerable emphasis.

A very important part of any course of study is the assignment of work by grades. The committee decided (1) to determine, from the standpoint of the psychological development of the child, just where each line of work indicated in the outline should be placed, and (2) to enlarge the outline by concrete material, helpful suggestions, and specific references for the teacher's use in every phase of the work.

At the beginning of the assignment for each grade is a list of specific references in professional literature. All of the books referred to are in the school library. Besides the references to the textbook in use, references were made to supplementary texts furnished each teacher. By following this method of outlining various phases of the work and quoting the necessary references, the tendency to follow the textbook as a guide rather than the needs of the pupils was avoided.

In selecting the lists of stories, poems, fables, and pictures to be used in each grade, the recommendations of the entire staff were requested. Each teacher sent to the committee a list of five suggestions under each heading. From this list and by means of further research by the committee, a required list and an optional list of stories, fables, poems, and pictures were assigned to each grade.

Early in the school year, as a motive for best effort, a bulletin was sent by the supervisor to all teachers announcing that a cabinet was in the office of the supervisor for exhibiting the best

work of pupils in language, arithmetic, and spelling. In order that this device might be truly representative the five best papers were selected by the pupils every two weeks. If a given pupil's paper was chosen a second time, it was not sent, but his name was placed on the honor roll in his room as long as his papers continued to maintain the standard. When his paper was not selected as best, his name was removed from the honor roll. At the close of the first semester the language committee selected examples of children's work from this cabinet for the new course of study.

By this time the teachers were conscious of high standards in teaching, and when type lessons were needed and requested, several teachers volunteered. A description of these lessons and also of three lessons taught by the supervisor were printed as one chapter in the course of study.

At a final meeting of all teachers certain technical problems were discussed and assigned as nearly as possible to the grade where the need was greatest. Each teacher listed the technical errors most frequently noticed in her grade, and in the final assignment each grade was made responsible for certain specific language habits and inhibitions.

Perhaps a word of explanation would be helpful in regard to the final assembling of all of this material. It is obvious that unless great care is exercised the general form of contributions made in this manner will vary greatly and the final form will lack coherency. The teachers were requested to follow a definite form in presenting material. Even then there was much work for the committee in assembling the material so that repetitions were avoided and systematic organization obtained.

Five substitute teachers were regularly employed and were free to help with the organization of material or to teach for a committee member whose services were especially needed for work on the course of study.

The completed course of study has the following chapters:

I. Different Lines of Language Work
II. General Aims in the Teaching of English
III. Story Telling (contributed by the supervisor)
IV. Problems in English

V. The Motivation of Language Work
VI. Plans for Better Speech Week
VII. Outline of Work by Grades (including examples of children's work)
VIII. Type Lessons
IX. Bibliography

SUMMARY

Teachers should participate in the making of the course of study. If high standards are to be maintained, teachers in service must be encouraged to keep in touch with the most advanced educational views. Bulletins should be accompanied by vivid discussions if interest is to be aroused. The entire staff must feel responsible for contributions when requested. Each teacher should receive credit for his efforts whenever the nature of the contribution permits.

Each committee member should feel responsible for his share of the work. The work should be so organized that every committee meeting should begin and close promptly. Careful planning will economize both time and effort. Directions should be explicit when a request is made for contributions. Bulletins sent out from the supervisor's office signed by the committee are more effective than requests from individual committee members.

Finally, the supervisor in charge should be capable of intelligent comprehension of the task, cheerful, enthusiastic leadership, sympathetic appreciation of human nature, and an untiring perseverance that can carry many details to a final culmination.

AN EXPERIMENT IN TEACHING ARITHMETIC IN THE THIRD GRADE

MARY L. DOUGHERTY
Formerly, State Teachers College, Mankato, Minnesota

There is probably nothing in arithmetic work in the primary grades that presents more difficulties than the process commonly known as "carrying" or "adding" in addition and multiplication, "borrowing" in subtraction, and the similar process in division. All of these processes may be termed "reduction." In addition and multiplication the reduction is from a lower to a higher order. In subtraction and division the reduction is from a higher to a lower order.

With the idea of attempting to find a way that would rid this work of its drudgery and help the children to understand what they are doing, the experiment here described was undertaken with a third-grade class. The question has often been raised as to how far it is desirable to rationalize these processes in teaching children and how far it is better merely to teach the method. The theory on which this work was based is that if the process is rational and the child has reached a stage where he is fitted to use it, he can himself develop the process so that it has meaning for him and he has a reason for its use. An attempt was made, therefore, to teach these processes inductively.

Early in the year addition was introduced. After adding single columns, the class was given an example of two columns, as 26, and asked to add. They gave the answer to the first column (15)

32
74
83
—

without difficulty. The question was raised by the teacher, "How shall we write this?" Then the units column was copied to one side, and one of the pupils readily placed the answer correctly—

the one ten well separated from the five units so that it was evident that there were two columns. Then the class was asked, "Why can you not write it so here?" The answer was given, "Because there is another column there."

Teacher: Is there anything we can do?
Child: We could add it in with the others.
Teacher: Why do that?
Child: Because it belongs in that column.
Teacher: How shall we know we are to add it there?
Child: We could write it above the line.

This was done to the satisfaction of the class. The children without suggestion adopted the habit of writing the 1 above the line and then writing the 5 in its place below the line: 26. This was

$$\begin{array}{r} {}^{3}2 \\ 74 \\ {}^{8}3 \\ {}^{1} \\ \hline 5 \end{array}$$

a surprise to the teacher, but it eliminated entirely the problem which often troubles children as to which to "write" and which to "carry," and the customary formula was never used. Thus time was saved. For several days the teacher kept strict watch over the work, but there did not seem to be any confusion in the minds of even the slowest children. Here and in multiplication there was no effort to break the habit of writing above the line the figure to be added. This was because it is a generally accepted method in adding or in multiplying to keep the carried figure for the sake of economy in checking in case of error. For example, an error in the third column may be checked by adding that column and the number to be added from the second column instead of re-adding all of the columns. If the figures are properly made and placed, there is no danger of confusion such as is almost certain to arise in using "helping figures" in subtraction or division.

After this process in addition was established, the process of multiplication with reduction was taken up because this presents the same type of reduction as addition. Preliminary to this, the children were given many examples of the type, 81. Then they

$$\begin{array}{r} \\ \times 6 \\ \hline \end{array}$$

were given the example $\begin{array}{r} 43 \\ \times 6 \\ \hline \end{array}$ and asked to solve it, being told that there was something new in it. When they discovered that they could go no farther than the first product (18), this combination was placed at one side and the answer written. Here the fact that they had the habit of correct column placing helped. They were shown an example in addition similar to the one presented and asked what they did there. After a little study one child responded, "Oh, I know. We can write it above the line in the next column." This was done: $\begin{array}{r} 43. \\ \times 6 \\ 1 \\ \hline 8 \end{array}$ Then there was a little confusion as to how to use it. They were asked what they were to multiply.

Child: Forty-three.
Teacher: You have multiplied the 3. What must you do now?
Child: Multiply the 4.
Teacher: What will that give?
Child: Six 4's are 24.
Teacher: Now what shall we do with the 1?
Child: Add it.

Both of these processes are relatively simple compared with that of subtraction with reduction. Before this was taken up, the work was carefully analyzed by the teacher into various stages of difficulty. It was presented in connection with problems in United States money, as is frequently done. The first reduction required was from dollars to dimes, as it was thought that this process would be easier for the child to image than the reduction from dimes to cents. Then ciphers appeared, first in the answer, then in the subtrahend, then in the minuend. When the children had become proficient in examples with United States money, the process unaccompanied by the money symbols was introduced.

Finally, six months after the first presentation, the children were given examples requiring two reductions. In preparation for this work the children were given much drill on subtraction combinations in which the minuend was from 10 to 18 and the subtrahend from 1 to 9, with the subtrahend always larger than the units

figure of the minuend. This was done for the purpose of fixing the number facts necessary in any example in subtraction where reduction is required.

The presentation was made in the following manner:

Teacher: I went downtown with $1.29 in my purse. I wanted to buy something that cost 75 cents. [This was written on the board in subtraction form and the suggestion made:] Let us see if we can find out how much money I took home. First tell me this: What pieces of money might I have in my purse?

Child: You could have a dollar bill.

Teacher: Yes, I will mark this $\binom{\$}{1}$ to show it is a dollar. How could I have twenty cents?

Child: You could have two dimes.

Teacher: I will mark it *d* for dimes. How might I have the rest?

Child: You could have a nickel and four pennies.

Teacher: Yes, how else could I have it?

Child: You could have nine pennies.

Teacher: What do you call one penny?

Child: One cent.

Teacher: Then can we call this nine cents? [Accepted and *c* written above the 9.]

Teacher: Now let us look at this:

$$\begin{array}{r} \$d\,c. \\ \$1.29 \\ -.75 \\ \hline \end{array}$$

If I have nine cents, I can pay out five cents, can't I?

Child: Yes.

Teacher: What shall I have left?

Child: Four cents.

This was written in its proper place.

Teacher: Now, I have how many dimes?

Child: Two.

Teacher: How many dimes do I want to spend?

Child: Seven.

Teacher: Can I spend seven dimes if I have only two?

Several children answer, "No." One child, "Yes, you can. Break your dollar."

Teacher: If I break my dollar, how many dimes can I get from it?

No one remembers. The children count and find that there are ten.

Teacher: I had two dimes. How many shall I have now?
Child: Twelve dimes.
Teacher: If I have twelve dimes, can I spend seven dimes?
Child: Yes. [Pause.] You will have five dimes left. [This was written.]
Child: Then you will have one dollar and fifty-four cents left.
Teacher: Shall I?

Class studies the example.

Child: No, you broke your dollar. You have just fifty-four cents left.

Several similar examples were given. The questions asked were, "Can I spend six cents?" "Can I spend four dimes if I have only two?" "What can I do?" The answer to this question was always that given by a child the first time, "Break your dollar." Then the question was asked, "What shall I have left?" No "helping figures" were written in, and the children never heard the formula, "four from two you cannot take," etc.

The children were very much interested, and after several examples had been worked one of the class said, "Put 2 there and see if it will do it."

Teacher: Do you mean use two dollars instead of one dollar?
Child: Yes.

This change was made to the satisfaction of most of the class, but the boy who had suggested it said, "You don't need to take just one dollar. You can use the two dollars."

Teacher: Yes, so you can, but what is the use? If you had ten one-dollar bills in your pocket and owed a man seven dollars, would you give him all of them?

Another child answered, "No, don't give him any more than you have to."

The boy agreed to this.

Teacher: How much do we have to use here? [indicating the example on the board].
Child: One dollar.
Teacher (*to boy who asked*): Shall we do it so?
Child: Yes.

From here the advance was made to five dollars and twenty-seven cents and to any number of dollars not exceeding nine with dimes less than those to be spent and cents more than those to be

spent. The introduction here was, "I have been to the bank and have more money to spend." Then one of the children said, "That is what my father does in his bankbook."

Teacher: Yes. Why does he do it?

Child: So he won't spend more than he has in the bank.

Teacher: Then, if we want to have money in the bank, should we know how to do this?

Child: Yes.

Child: I see how to do it all right, but the trouble is I do not always know what numbers to put down.

Teacher: Why is that?

Child: Because I don't know the subtraction answers [combinations] well enough.

Others admitted this trouble.

Teacher: What can you do?

Child: Study them.

This became the incentive for intensive drill on the subtraction combinations.

For three weeks the class was given no advance step in this work, and frequent drill was given on such examples. Then the class was told one day that they had done so well that they might have something new. An example like $\$7.64$ was given. They

$$\underline{-2.38}$$

were reminded of the columns showing dollars, dimes, and cents. Then they were asked, "If I have four cents, can I pay out eight cents?"

Child: No, but you can use a dime.

Teacher: How many cents are in a dime?

Child: Ten cents.

Teacher: Then how many cents have I?

Child: Fourteen cents.

The subtraction proceeded.

Child: Three from 5 leaves 2.

Teacher: Why isn't it 3 from 6?

Child: You used one dime.

The children recognized this as natural without "crutch" or formula. When a child occasionally forgot, the question, "Why is it not 3 from 6?" recalled the fact, and he corrected himself.

The matter was never explained to the class. They offered their own explanations whenever a difficulty arose. Two reductions were not required in the same example at this stage. The next advance after practice drill on this step was to mix it with the first step.

The cipher was then introduced, first in the answer, then in the subtrahend, then in the minuend, with periods of practice on each new step before the introduction of the next. The last of these, the cipher in the minuend, presents particular difficulty because it requires reduction from dollars through dimes to cents. The example, $7.04, was given.

$$\begin{array}{r} \\ -2.86 \\ \hline \end{array}$$

Child: Six from 14 leaves 8.
Teacher: How did you get 14?
Child: I used a dime.
Teacher: There are no dimes [indicating on the board].

One child, after hesitation and study on the part of the class, suggested, "You will have to break a dollar." Class agreed.

Teacher: Then what shall we have?
Child: Ten dimes.
Teacher: Shall we use them all?
Child: No. Use only one dime.
Teacher: Do you all agree?
Child: I see that it is 6 from 14, but what do we take 8 from?
Teacher: See if we can find out. When we broke the dollar, what did we get?
Child: Ten dimes.
Teacher: How many dimes have we used?
Child: One.
Teacher: Then how many dimes have we now?
Child: Nine dimes.
Teacher: What shall we take 8 from?
Child: Oh, I see. Eight from 9 leaves 1.

The example was then completed. Two from 6 leaves 4.

Teacher: Why is it 2 from 6?
Child: Because we broke one dollar.

At this time it was decided to give the children the transition from subtraction using United States money to subtraction where abstract numbers are involved. An example such as they had used was placed on the board and worked. The same example was

written again, omitting the dollar sign and the decimal point, with the statement, "Now I am going to give you something new." One boy remarked, "You forgot your dollar sign and decimal point." His criticism was recognized with a smile and the statement, "We'll go on." The subtraction was carried on without a question and with no evident recognition that an example had been repeated. When it was finished, all inspected it.

Child: We have the same answer as last time.
Teacher: Is that so?
Child: No, we haven't. The first answer is 9 dollars and 76 cents, and the other is 9 hundred 76.
Teacher: Is this right? [indicating the last].

Children inspect and say it is.

Teacher: Can we subtract numbers that are not money?

Children consider and then answer, "Yes."

Teacher: What might this be? [last example].
Child: It could be all dollars.
Teacher: Yes. Could it be anything else?
Child: It could be potatoes.
Teacher: Yes, what else?

A long list was given. Several examples were then given stating problems, as, "I had 764 bushels of potatoes and sold 346 bushels. What had I left?" 764. From that time no difference
−346

was made between the abstract and the concrete forms.

The work from the introduction to this stage covered a period of six months, during which time the children were keeping up their practice on the other processes that had been taught.

The next step to be introduced was subtraction where two reductions are required in the same example: 734. It was antici-
−286

pated that there might be trouble here.

The first child was confused. The teacher gave an example like the first ones presented and let this child work it and asked for explanations at each step. Then the child worked the new example without help. During the period each child worked one example

without any question as to the procedure. When asked why it was 8 from 12, or 2 from 6, they answered promptly, "You used one."

This method of teaching has several advantages. The children understand it because they have discovered it. They have no habit to break such as they have when they have learned the formula and used the "helping figures." It is economical in time and effort for all concerned. It prevents the unsightly pages made by writing in the "helping figures" and avoids the confusion likely to arise.

Inexact division was the last process introduced. Much practice in exact division with the tables which were known preceded this.

The theory which formed the basis for the following method was that a large contributing cause to mistakes in division is lack of knowledge of the appropriate exact product for the example being worked. For this reason examples requiring reference to only one table were used in any one period. The products in this table were written on the board above the place where the work was to be done. These were first put on in regular order, but soon the children gave them, and they were placed on the board at random. At first, an example in exact division with only one figure in the quotient was given, as $\begin{array}{r} 8 \\ 7\overline{)56} \end{array}$. Immediately below this were given in serial order all of the inexact divisions to the next product, $7\overline{)57}$, $7\overline{)58}$, $7\overline{)59}$, $7\overline{)60}$, $7\overline{)61}$, $7\overline{)62}$. The children worked many examples like this in different series until one child remarked, "I know that because it is always just one more over," indicating that he understood how the fractional remainder was obtained. The teacher expressed mild surprise at the statement, and the class verified it by studying the work on the board and finding it to be true. To make sure that all understood this part of the process the next step was taken.

Teacher: Then see if you can work them when I write them differently.

An exact division example was given and under it inexact divisions involving the same integer quotient but not in serial order. The children discovered that they must subtract the exact product

from each dividend, as 56 from 61. This type of drill was carried on for about three weeks. The next step was to place all of the products at the top of the board without calling attention to the particular product to be used in the example being considered. An example like $7\overline{)69}$ was placed on the board and the children asked to find in the products above the one they should use for working this example. After two or three examples had been worked, one of the children said, "You always have to find the one that is nearest."

Teacher: Is that true?

The next example was $7\overline{)54}$, and a child gave 56.

Teacher: That is nearest. Is it the one we need?

After looking at it, one child said, "No, it is too large."

Teacher: What shall we use?
Child: Forty-nine.
Teacher: Now can you tell me how to know which number to use?
Child: You have to use the nearest one that is smaller.

A great deal of practice was given at this stage. At first the required order was, "Use 49. In 49 there are 7 sevens. In 54 there are 7 sevens and 5 over, five-sevenths." This order was followed merely to fix in the child's mind the process of referring to the exact product and of recognizing the factor which would give the quotient in the example. After some time first one child and then another shortened the statement, saying, "Forty-nine; in 54 there are 7 sevens and five-sevenths." This was recognized by saying, "You may do it in your mind if you can do it more quickly that way." Whenever any uncertainty was manifest the full form was recalled.

When most of the children worked easily by merely referring to the products and, without naming them, working the example, the next step was taken up. This was to teach division where two figures are required in the quotient. Several examples such as had been used for some time were given and worked. Then the teacher said, "I am going to change this first example and see if you can work it." The integer in the quotient was left and a digit added which with the remainder would give an even division

for the second figure of the quotient. Naturally the children did not know what to do. It did not seem necessary to begin with United States money as the children had made the transition in subtraction to the use of abstract integers. Therefore, the following method was used: The example $8\overline{)78}$ $9\frac{6}{8}$ had been worked. This was changed so that it stood $8\overline{)784}$ 9. The dividend was written at one side (784), and the children were asked to read it. Then the teacher asked, "This is 7 *what?* [pointing]. When we read it we say 7——?"

Child: Seven hundred.

Teacher: We will mark it so that we will remember $(784)^{h}$. Now tell me what we have besides the 7 hundred.

Child: Eighty-four.

Teacher: Yes, that is 80 and how many more?

Child: Four more.

Teacher: Suppose we write it 80+4 [written as spoken]. Now 80 is eight *what?*

Here the class seemed puzzled.

Teacher: How many 8's in 80?

Child: Ten 8's are 80.

Teacher: How many 10's are 80?

Child: Eight 10's are 80.

Teacher: Eight *what* are 80?

Child: Eight *tens* are 80.

Teacher: Then this 8 [indicating the 8 in 784] is *what?*

Child: Eight tens.

Teacher: We will mark it so: $(784)^{h\,t}$. The 4 is 4 *what?*

Child: Four 1's.

Teacher: Yes. There is a name we give that. We say units when we have a number less than ten. [The word is written on the board and pronounced.]

Teacher: Shall we write it here? $(784)^{h\,t\,u}$

Child: Yes.

Teacher: Let us tell what each of these is [indicating as the class says, "7 hundreds, 8 tens, 4 units"].

Teacher: Now let us come back to our example and mark the figures. Then we shall see if it will help us.

$$\begin{array}{r} 9 \\ \hline h\,t\,u \\ 8)784 \end{array}.$$

Teacher: The first part is right as we worked it. Tell us again so we will be ready to go on.

Child: In 78 there are nine 8's (72) and 6 over.

Teacher: Good. How did you find the 6 over?

Child: I took 2 from 8.

Teacher: What is the 8?

Child: Eight tens.

Teacher: Then the two is ——?

Child: Two tens.

Teacher: And the 6?

Child: Six tens.

Teacher: Six tens are what?

Child: Six tens are 60.

Teacher: And four are ——? [pointing to the example].

Child: Sixty-four.

Teacher: How many 8's in 64?

Child: In 64 there are eight 8's.

Teacher: Yes, and we must write it directly above the four $\begin{array}{r} 98 \\ \hline 8)784 \end{array}$. Now let us try one of the others.

During the first period all of the examples given were those which the children had worked in simple form changed so as to require the reduction. If there was any hesitation, the children were required to name the product to be used in the table, as $8\overline{)584}$: "Fifty-six. In 56 there are seven 8's. In 58 there are seven 8's and 2 over. Two tens are 20 and 4 is 24. In twenty-four there are three 8's."

The children of their own accord shortened the form as soon as they saw the process clearly. When they did so they were told, "You may do it in your mind if you can do it more quickly that way." If they could not, they continued to give all of the steps. Here as in subtraction, they never used any helping figures. They did not need them because they understood how the new dividend was found.

THE CITIZENS' RELATION TO THE COURSE OF STUDY

H. B. WILSON
Superintendent of Schools, Berkeley, California
ETHEL I. SALISBURY
Director of Curriculum, Los Angeles, California
Formerly, Director of Kindergarten and Elementary Education, Berkeley, California

The last decade has brought many changes in public-school curricula. Formerly such curricula were narrow; now they are broad. They used to provide for a few subjects and for a limited experience; now they include many subjects and broader educative opportunities. They used to provide mainly problems appealing to intellectual ability; now they are so varied as to be adapted to all types of learning—intellectual, emotional, motor.

Not only are curricula broader and richer in the opportunities which they offer for the education of children, but they are definitely built to develop socially efficient citizens. A few years ago there was little concern with reference to the values of the content of curricula. The main consideration was that what was prescribed should be reasonably comprehensive. Now each included body of subject-matter or experience is determined in the light of its social value.

The improvement of curricula has been brought about by the adoption of a better technique of determining and developing curricula and the subject-matter values in the various fields of human knowledge. Formerly few participated in the determination of subject-matter content; now curricula are improved to the extent to which constructive criticisms from all points of view are focused upon them during their making. Once the superintendent of schools alone determined the subjects to be taught in the public schools and the content of each from grade to grade. Now pupils, teachers, supervisors, superintendent, and community contribute.

The purpose of this discussion is to emphasize and illustrate the values arising from the participation of intelligent, interested

citizens in the making of the course of study. The values to be emphasized are of two sorts: first, those appearing in the course of study itself and, second, those arising from the more intimate and correct understanding of the course of study which comes to the community through the participation of interested citizens in the work of making the course of study.

It was with the foregoing considerations in mind that the general committee of the Berkeley elementary schools decided to make the mimeographed outlines in use in the various subjects the basis for a series of conferences with groups of intelligent citizens. This general committee, composed of the chairmen of the various subject committees and made up largely of principals and supervisors with many community relationships, was in a position to suggest a desirable personnel for the consideration of each subject from both the standpoint of the service each could render in improving the course and the need on the part of some citizens of first-hand information concerning the work on the course of study which the schools were doing.

After a preliminary survey and discussion of all of the factors to be considered the committee decided upon certain policies to be carried out with reference to the selection of those who were to be invited to the conferences. These were as follows: to select a different group of citizens for each subject, in order to distribute this helpful contact among as large a number as possible; to have represented as many civic, social, and educational organizations and types of business as possible; and to invite to any specific subject conference individuals who, through their occupations or avocational interests, were particularly qualified to be of definite or expert help in relation to that subject. How these policies were carried out will be illustrated by reference to the activities of committees of citizens who aided in criticizing the tentative courses in arithmetic, geography, and nature-study.

Arithmetic.—The citizens' committee was made up of the proprietor of a large dry-goods store, the state commissioner of elementary education, a dentist, the cashier in a local bank, the head bookkeeper in another local bank, the head of a bonding firm, a manufacturer, a dealer in building supplies, and the head of a large real estate firm.

Geography.—The citizens' committee consisted of the secretary of the chamber of commerce, the head of a large advertising firm, the head of a large public-service corporation, the director of a private school, and the head of a large clothing establishment.

Nature-study.—This committee of citizens consisted of the director of the city parks, the head of the park board, a university professor of biology, the director of science and nature-study in a neighboring city school system, and a successful florist.

In connection with this plan for selecting participants in the conferences it seemed advisable to agree upon an approach to these citizens and a mode of procedure in meetings that would guarantee, first, their presence and, second, their interest in and enjoyment of the discussions. Past experience and a knowledge of the layman's usual reluctance to try to be of service in a field toward which he is indifferent or which he considers a matter for the attention of experts led the committee to consider these problems carefully.

Invitations were not sent as formal communications, but each citizen was called upon personally by the superintendent, the chairman of the general committee, or the particular subject chairman whose outline was to be discussed. He was told of the purpose of the meeting and given the names of the other citizens to be included. A complete outline of the work was placed in his hands, and he was told how it had been developed by teachers as a part of the whole co-operative course of study program. He was asked to read it and was urged to attend the conference whether or not he wished to speak.

By giving personal attention and time in this way it was possible to convince even the busiest of business men and women of the sincere desire of the committee to get the reactions of patrons, and to show them the value of this opportunity to devote some time in a constructive way to bettering their schools. No one failed to respond without a reason which was obviously not an excuse. Care was taken to limit each group to a size which would encourage informal discussion and put at ease those who might feel strangely foreign in this pedagogical atmosphere.

The school people did not attempt any defense in case of adverse criticism even if this criticism was unsound in the light of

modern psychology. Suggestions were taken for what they were worth. This did not prevent the wholesome discussion of various points of view, but it did obviate argument and eliminate the possibility of committees being forced to appear to be on the defensive. While it is impossible to give the complete stenographic reports of these conferences, a few quotations will serve to illustrate their tone and the main values derived from them.

In the preliminary remarks of almost every citizen who spoke was an appreciation of the time and thought which had been given by committees to the formulation of the courses. In several instances the reading of the manuscripts had evidently been a revelation as to the philosophy and plan upon which the daily lessons of children are based. These expressions on the part of capable patrons meant much to the committees. Following are a few quotations in brief taken from the complete reports of the various conferences:

I am glad to have the opportunity to speak. In the first place, I want to say to those who have planned this that you have put a tremendous lot of work on it.

It is good, and there is no question but that all this is valuable work and the teachers of Berkeley are to be commended.

I want to congratulate the teachers who have worked this out. The impression I get is that this is a very vital piece of constructive work along the lines we need.

I like the thought all through this course of study—the wonderful chance it gives children for future development, eliminating unnecessary things, emphasizing necessary ones, bringing out wonderful things in children—kindness to animals, etc. We didn't once get these things in school.

So much are the impressions of an outsider. The course of study seems wonderful to me—it looks good.

I want to say I think this is a wonderful scheme.

One of the busiest men of affairs made the following admission:

I expected to come here without reading this course, but I have read every word of it with great interest. I am particularly pleased . . . .

I want to say that I think this is a wonderful scheme. One thing I appreciate is the accuracy which is insisted upon. Inaccuracy is one of the main faults business men find today. There is only about one stenographer in ten

whom you can work into your bookkeeping department, even though they have taken the course. During the war bookkeepers were almost impossible to get, even though you trebled their salaries. Everyone has trouble in the bookkeeping department. It means that in most cases the employer has to go down nights and straighten out the errors. It seems to me that this course will solve the problem. If people know how to figure interest, etc., it will save them a great deal financially. Most of the loan offices in San Francisco get from 20 to 25 per cent interest, but the way they explain it to the customer is that they are only charging 8 per cent. I think you have a wonderful scheme and believe it will stir up tremendous enthusiasm for arithmetic. Just another thing—I think the graph proposition of illustrating different problems by lines, etc., is good. If salesmen today could work that out, they could double their sales. A great many people refuse to buy without facts and figures, and by the time the average salesman tries to figure it out the customer has changed his mind.

Citizens in a number of instances were able to correct technical inaccuracies and to supplement the many specific helps with which the committees had sought to enrich the course. The following are typical suggestions on the nature-study course:

I believe that we haven't made quite the use of California authors that we should. I believe that I could help out with the names of books. Harry Wm. Meyer's *The Bird Convention* deals with California birds wholly. The second- or third-grade teacher might read this to her classes or let them read it themselves. It gives personality to birds which always appeals to little folks.

On the subject of four-footed mammals the best thing is the book by Nelson published by the National Geographic Society. It is full of colored pictures with interesting write-ups about every four-footed animal among the American mammals.

One by Steven, about California mammals, is over the heads of children but is very good for teachers to use in finding out the habits of the bear, ground-squirrel, etc.

Boys here in Berkeley by the time they are twelve years old are all crazy to own a rifle, either an air gun or, preferably, a twenty-two. The first thing they do is to go back into the hills and shoot at our common song birds. The very ripest time to hit the school children with information about the protective laws is about the time they wish to go out to shoot birds. This time seems to be at the age of about twelve years—the high sixth or low seventh grade.

As to technical inaccuracies, the following suggestions were offered:

A thing that I notice in the beginning—something to guard against—is this "insects *and* animals." Insects *are* animals. This would lead children to

believe that insects are not animals whereas they are. Yesterday it was my pleasure to travel with a little four-year-old by my side. His observations, as he pointed out the anise, where the caterpillars grow, and the peach trees, etc., were perfectly fine. He had been doing some observing for himself, and he knew how to distinguish between the kinds of trees, etc. We should be very careful in dealing with these little fellows as to what impressions we leave.

In looking over your course I am wondering whether, after all, the vocational side has not been overemphasized. A little overemphasis on agriculture and gardening—that is one reaction of mine.

I agree with Mr. ——— on the economic point. There is an overemphasis of the dollars and cents attitude—vocational education. We ought to get away from that point of view—teach that there is something more than earning a living. A child should be taught that he must *serve*—help his community; leave far in the background the idea of simply learning something by which he can make some money and earn a living. Instead of the talk about the money taken in by raising vegetables, could we not emphasize simply the joy of accomplishment; for instance, "look what splendid returns we have received—how beautifully they have grown. See the meadow lark, how he sits on the post and sings"—not that he destroys a certain amount of grain per year. We should appreciate the meadow lark for making the out of doors interesting. Teach us how to live better our own lives.

These two main points can still stand emphasizing to a greater extent—field trips to develop the powers of observation and getting away from the dollars and cents or vocational side of training. Teach that there is something more in life than simply learning how to do things to make a living.

A large percentage of parents are believers in formal discipline. Many parents do not know of the educational movement to acquaint even elementary children with vocational materials and fields.

I most cordially indorse what Mr. ——— and Mr. ——— have said. I believe every word of it. There are some very subtle, important points that in the drift of the educational system we are overlooking. Is it leading us only to practical results? The great philosophers and scientists all came from Europe. They are all English, German, and French—they are not American. The reason is because we have so emphasized the practical side. In teaching nature-study in your schools you ought to be planting germs of things which will grow into wholesome things of life, and the mystery, prophecy, etc., of this world in which we live. This can be done with a five-year-old. He can learn the difference between creation and evolution. These facts are useful but they must have organization. We haven't touched the basic thing

which ties them together. Get the child's curiosity aroused that he may some day add to the sum total of human knowledge. The most practical things in this world are the ideal things. If we could get schools to realize this! Mere facts of life lead us on to mystery and wonder of the goal of life.

My points are, then, (1) leading the child to the soil to bring out the relation of living forms; (2) emphasis on the scientific side, to lead on to more knowledge; and (3) the aesthetic side—the appreciation of nature as related to art. So often the artists of today go to the old Greek and Gothic figures for designs for our buildings here instead of making use of the many beautiful things in nature around us. Art schools in Japan have their children study nature in art. The art of Japan is not based upon formalism, convention, but on nature-study.

There are many boys here in this town who have taken examinations in nature-study and know nothing. They haven't been out of doors to study. They haven't really had their interest encouraged. They do not know the families of trees, plants, birds, insects, etc. There is nothing easier to teach a child than this particular field.

The aesthetic and scientific side should be accentuated, and the economic and practical side reduced.

George Stone of our city in making moving pictures has gone into the scientific side of that work. He has made two films. The "Origin of Life" teaches these problems in a way that any child can understand and learn. It is wonderful, beautiful, and it offers safety and security. It was used by the United States government, but we haven't yet awakened to it right here in Berkeley. It is of immense value in the teaching of nature-study, in a way to fascinate any child.

Such comments are stimulating to teachers, particularly since the committee was well aware of the fact that the children of the last speaker are ardent nature-lovers resulting in their having rare knowledge of plants and animals and their habits.

The commissioner of parks made this suggestion:

It should be endeavored to bring out and develop in children the most important spirit that they may appreciate their public buildings, art, etc. There has been considerable trouble with boys in destroying park property, plants, etc. If they understood the trouble to raise plants, they would appreciate them more.

It is remarkable to see the public pride displayed by boys of other countries, particularly France. They know the whole history of their statues, etc. It would be a boy who would take a person to task who destroyed a tree or anything.

It is true that the boys of our best families, of people who live in our best districts, are most destructive. School children should know all about these

things so that they would learn to appreciate. They are the ones who could help with the problem of beginning our public parks. It is not so much the products of the parks that are of value but the creating in the children of the love of plants so that they won't destroy. They should learn that trees, etc., are just like human beings—they don't want to be hurt or destroyed.

In a number of instances the discussion showed that some of our most capable and intelligent citizens were not acquainted with the extensive provision made in every building in the city for individual differences in ability among children. It was not difficult to interest the group in the attitude of the schools and their definite achievements along this line so near to the hearts and understanding of those who believe that every child should be given the best opportunity for success that it is possible to give him. This came out in the discussion of arithmetic.

I had not had time to look over the course thoroughly, but I am favorably impressed and think it is practical and useful. Arithmetic is a practical subject affecting banking and every other avenue of life.

I think there ought to be some provision made for the slow pupil. Every class, particularly the arithmetic class, has slow pupils. There are always a number of youngsters in the arithmetic class who cannot keep up with the leaders. The tendency of the teacher is to have the class progress in relation to the most advanced pupils. The slow youngster gets so far behind that he is finally lost and has to drop into a lower grade. Another feature is the tendency to guess. One employee of our bank had such and such a thing given him and was asked what the balance was. He would say, for instance, $585.00, and then look it up to see how near he came to it. It finally caused his withdrawal from the bank because he could not stay on that basis.

It seems, in my opinion, that some of the grades advance the children a little too rapidly, but I can see by the work of my youngsters that they are better qualified today to take up the practical values than most of us were at the same age. The main thing that I want to point out is taking care of the slow pupil. The youngster who is backward in school is the one to look out for. He is the one who is entitled to the attention of the teacher. The class is usually advanced according to the bright pupil.

The chief point I want to make regarding this course is the provision for the backward child because I feel that he is the one who really needs the attention.

Here was an excellent opportunity for the chairman to explain the general policy regarding these pupils, the service being rendered by the research department in analyzing pupil abilities and characteristics, and the specific provisions for meeting their needs.

It promises well for community interest in and understanding of the schools when patrons and teachers can get together and discuss such large problems of education.

One patron who spoke in connection with the discussion of the geography course of study had a big message for teachers which is just hinted at in the following quotation:

> In the first place, I believe that geography ought to be approached from the child's point of interest. The basic thing of all study is love; bring the child to love the trees and hills and arouse his curiosity. We have what is called the Cosmopolitan Club at the University of California. The University of California has attracted more men and women from all parts of the world since the war than any other university in the United States. There are several hundred men and women from Japan, China, India, Roumania, Central and South America, and many less known parts of the world.
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> There is a Mexican boy going to the University of California who is about nineteen years old and is supporting two brothers while going through college. You can't hear him talk without feeling that we have misjudged Mexico. He says the people of Mexico are lovers of peace and are a quiet people, while the people in this country are lovers of getting ahead. He says that there are things they can learn from us, but that we can learn something of the joys of life from the Mexicans.

The main values of these conferences have been summarized. One further point may be mentioned. The conferences had the quality of stimulation which should characterize every educational activity. They did not end in themselves but resulted in a whole train of other activities of a constructive, positive, wholesome sort.

Teachers and principals went back to their schools inspired by the appreciation and careful thinking given their problems by those whom they are serving. These business and professional men had a definite basis for their discussion of the work of the public schools at rotary or commercial club, lodge, or luncheon. The progress and development of a democratic institution depend upon the belief of patrons in the fundamental principles which that institution is seeking to carry out.

HANDWRITING IN THE PRIMARY GRADES

MARY WILLCOCKSON
State Normal School, Oshkosh, Wisconsin

When we teach children to write we are merely giving them a new form of expression. The children, then, must have something to express before we attempt the first writing lesson. In the past very little attention has been paid to the psychology of handwriting. After scientific investigations showed that the adult world needed to turn its attention to handwriting, teachers all over the country frantically began remedial work in handwriting, but remedial work from an adult standpoint. First-grade children laboriously practiced making single letters to the monotonous counting of the teacher. Why should first-grade children practice writing *a* when they feel no need for it? Suppose they have cut out cats for their animal books and have asked the teacher to label them. She says, "Wouldn't you like to label your own?" Then they feel the need of learning to write the word, and, if the *a* causes trouble, the children see why it should be taken out of the word for special drill.

Even when the child feels the need of such practice it seems unwise to separate the letter from the word. He realizes that that part of his word must be changed in order that his label can be read. He has compared his word with the teacher's and sees where he needs help. He is satisfied with the first and last of the word, and therefore his attention will be focalized on the difficult letter as he writes the whole word over and over.

After the psychological approach to the teaching of writing is made—after the children desire to write—how is the teacher to conduct her lesson? She goes to the blackboard and writes the word *cat*. If any child is fourteen feet from her, the letters should be at least one and one-fourth inches high, and two inches apart. If capital letters are used, they should be approximately twice as

high as the small letters. The teacher stands at the left and writes as nearly at the eye level of the children as possible. Many primary teachers write facing the class. This is psychologically wrong, for it gives the beginners a wrong impression of correct writing position. The teacher writes rapidly with the large swinging movement that she wishes the children to develop. She does not call attention to letters. The children are at the highest level of attention because of their purpose.

The teacher writes the word several times on the blackboard. Each time she writes the word she has the children visualize it. They close their eyes and try to see the picture on their eyelids. They open their eyes to see if the eyelid picture is like the writing on the blackboard. If some child imitates the teacher's movement and writes the word in the air, she does not object. This is not encouraged, however. Writing in the air has proved itself unsatisfactory because the children form haphazard habits of arm movement.

After the children have properly visualized the word, they are sent to the blackboard to write. Blackboard work is valuable in getting control of the hand muscles. It develops free arm movement. If there are more than fifteen children in the class, one group should do seat work while the other group works at the board. The teacher cannot properly supervise blackboard work when there are more than fifteen children.

The teacher gives each child a half-stick of chalk and shows him how to hold it. The children write and do not erase until the teacher sees the work. The teacher must move quickly from one child to another, noting the obvious weaknesses and helping individual children. The teacher realizes that there are individual differences in handwriting ability as well as in all other subjects in the curriculum.

The old logical type of teaching handwriting opposed this new psychological method. It did not allow for individual differences. Every child in the class stood before a ruled blackboard space and wrote a row of *a*'s to the teacher's monotonous counting. All children had to write with the same speed and with about the same degree of legibility.

The children write the word several times, criticizing their work as the teacher comes to them and shows them individually how to write the word correctly. When a child secures a good model, he is sent to his seat to write it on paper, and another child takes his place. The children who do not write well are always given the first chance to work at the board.

If the teacher observes the same weakness in the writing of three or four children, she calls all of the children back to the board and presents the word again, making the children feel the need of revisualization.

When the children have produced satisfactory writing at the board, they write on paper at their seats. This makes a good summary for the lesson. They write on large sheets of rough manila paper, nine by twelve inches in size, using a large primary pencil, one-half inch in diameter, with soft, thick lead. They do not write *cat* under the picture, but on a separate sheet to precede the picture, or on the unused side of the paper.

The following day the word *cat* should be used again, incorporated in a sentence suggested by the children. Perhaps it is, *See my cat,* or *Mew, cat, mew,* or *Run, cat, run.* New words should not be attempted until the old ones are learned.

The writing period should be short, ten minutes in the first grade and fifteen minutes in the second and third grades. Of course, not all of this time is spent in actual writing. It takes time for the teacher's introduction, for her writing and the children's visualization, for the passing to and from the board, etc. Usually the first writing lessons are deferred until the children have been in the first grade a month. The first four weeks are spent in encouraging large free movements at the blackboard with chalk and at the desks with large sheets of paper and crayolas. The children also do much freehand cutting during this period. Large sheets of unprinted newspaper are particularly good for this. After the first month, the children write at the blackboard for several weeks and then use the blackboard and paper. Illustrations on paper form excellent motivation for the writing period. They may be made during the drawing or seat period. Every writing lesson should grow out of the children's social experience. Excursions,

records, riddles, rhymes, stories, invitations, etc., furnish excellent material.

In the second grade the children continue the blackboard work, transferring it to paper as soon as the copy is satisfactorily made. Here ruled paper with lines one inch apart and thick, soft-lead drawing pencils of ordinary size are used. The teacher continues the same method as that begun in the first grade but with more difficult material. By the close of the second year the children no longer need to watch the teacher as she writes. She writes the sentence under a curtain and raises it for the children to visualize. She raises the curtain and lowers it as the children need individual help. This saves time as well as increases the power of concentrated imagery. Original work should be encouraged, the teacher spelling on the blackboard any word that the child needs.

In the third grade less blackboard work is done. The sentences suggested by the children are written under the curtain as in the second grade. A large amount of original work is now encouraged, the teacher spelling all necessary words on the board and immediately erasing them. Original compositions usually must be re-written after the teacher corrects them. Often the children make a group composition, the teacher writing it on the board as the children dictate. Then the children merely copy it from the board. By the end of the third year the group composition may be erased, and the children reproduce it without the model.

Pens are introduced early in the third year. Blots are not tolerated by the teacher or the group. The paper is now ruled with lines five-eighths of an inch apart.

All primary children should be familiar with a standard writing scale. Individual scales should be posted on a low bulletin board, each child placing his best writing under his scale and changing it as he sees improvement in his work.

Type Lessons I to IV indicate the way in which primary handwriting is taught in the training department of the Oshkosh State Normal School. We try to keep constantly in mind the fact that the child's desire to write depends upon proper stimulation—proper conditions in his social environment. The teacher is not justified in teaching her initial lesson until the child indicates in

some way his desire to write. She must, therefore, use her initiative to stimulate the child in such a way that he shows by his general attitude toward writing material that he desires to write.

The teacher must also keep in mind three teaching points—first, legibility; second, speed; and third, automatic facility in execution. Writing must become a well-organized habit.

Frank N. Freeman says,

> The writing of the beginner should have two characteristics. It should be very large, and it should be done with the arm as a whole rather than with the fingers. . . . . These two requirements of size and arm movement are met in the highest degree by blackboard writing, and accordingly this has been found to be the best form with which to begin.
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> When the child begins to write on paper after several months of blackboard writing, he should use rough-surfaced paper, large, smooth pencil or crayon, and should continue to write large. For a time the one-space letters may be one-half inch high. The height may be gradually reduced until in the third grade the child is using letters about half as high. . . . . As the requirements on the score of accuracy should be less severe than those imposed upon the older pupil, so also should he be required to write less rapidly. Not only is he less capable of rapid movement in general, ... but he is less adept in this particularly difficult and complex movement. This is not always recognized. The worst delinquents in this regard are some of those who emphasize arm-movement drill.[1]

Charles H. Judd says,

> Writing, which is essentially a co-ordinated movement, has to be developed through trial after trial, with consciousness directed, not upon the movement itself, but on the visual images which appear as results of the movement. What one is training is the movement; what one is thinking about is not the movement at all, but visual images.[2]

The Zaner letter forms are used in the training school, with the exception of the capitals *X* and *G*. Capital letters are to be joined to the next letter in the words in which they occur except in the following cases: *D*, *F*, *I*, *O*, *P*, *T*, *V*, *W*, and *X*. Small letters are begun on the line when alone or as initial letters except in the case of *a*, *c*, *d*, *g*, *o*, *q*.

[1] *The Teaching of Handwriting*, pp. 80, 82, 83. Boston: Houghton Mifflin Co., 1914.

[2] *Genetic Psychology for Teachers*, p. 187. New York: D. Appleton & Co., 1903.

TYPE LESSON I—GRADE IB

(Based on a Game)

The children had two new rubber balls, a red one and a green one. The teacher and the children played "catch." During the free conversation period the teacher asked the children if they would like to draw the picture of the balls on the blackboard and name each ball.

There were more than fifteen children in the class, so the teacher invited one group to work at the board while the other group played with the balls. She asked a boy to draw a red ball for her; then, when the attention was at the highest level, she wrote *ball* beside the picture. The children had used the word in their reading lessons so that the word was not a new one.

She erased the word, wrote it several more times, and then had the children close their eyes to see the word on their eyelids. They opened their eyes to compare their image with the word on the blackboard. This was repeated. The children took their places at the blackboard, and each drew a red ball. The teacher moved rapidly to each child, writing the word for him and quickly erasing it. Before she left him she was sure that he held his chalk correctly and had made a good start.

Several of the children had trouble with the bridge on the letter *b*, so the group was called to the teacher who wrote *ball* over and over for them. They returned to the board and wrote it for themselves. When they had a well-labeled red ball, the teacher gave them green chalk and they made green balls, labeling them with little help from the teacher. The children selected the best-labeled balls and asked if they might show them to the IA children.

The blackboard group changed places with the group playing ball, and the lesson was continued in the same manner. At the end of the period the IA class came into the room, inspected the labeled pictures, and played with the new balls.

The next five lessons were suggested by the children. They were:

1. My ball.
2. See my ball.
3. See my red ball.
4. See my green ball.
5. See my ball roll.

When each of these lessons was written, half of the group cut out balls and colored them at their desks, while the other half of the group worked at the blackboard.

TYPE LESSON II—GRADE IA

(Based on a Riddle)

The teacher asked the children if they knew any riddles. One little girl said that she did and was invited by the teacher to give it. She gave one about the schoolroom clock, and the children immediately guessed it. The teacher said that she was going to tell them her riddle on the blackboard. They must

read it silently and whisper the answer in her ear. She told them that she had seen it in the circus parade the preceding day. She raised the curtain and the children read:

I am black.
I can trot.
You like to ride on me.
What am I?

The children whispered the answer in the teacher's ear. The teacher said, "I will write the answer on the board." She wrote, "I am a horse."

She showed them the horses that they had cut out in the previous seat period and asked them if they would like to make a new page for their circus booklet. The children were eager to do this, so the teacher erased the riddle and answer from the board, and told the children that she would help them.

She wrote the sentence, "I am a horse," several times, erasing each copy. The children visualized the sentence with their eyes closed, then opened their eyes, and compared the image with the sentence on the blackboard. This was repeated over and over. Half of the group went to their places at the blackboard, while the other half went to their desks and pasted the horses on large sheets of manila paper. The children at the board wrote the sentence, asking the teacher to raise the curtain when they needed help. They did not copy from the teacher's sentence, however, for the curtain was lowered before they resumed writing. As soon as a child could write the sentence, he erased his work, took his seat, wrote on paper, and then pasted his horse on the other side.

At the close of the lesson the child placed their papers on a low bulletin board and compared them. The teacher praised especially the large writing. Each child took his paper over to his individual handwriting scale on another low bulletin board and compared it with his last paper and with his scale. If it showed marked improvement over his last paper, he took down the poor one and replaced it with the new one. Later all of the pages were made into a circus booklet.

TYPE LESSON III—GRADE II

(Based on the Making of a Gift)

The children had made green stockings from blotters for father's Christmas gift. They were talking about the card to accompany each gift when a little girl asked if they could not write a verse on the card. The teacher suggested that they make up a verse. During the language period, this verse was formed:

This stocking is too small,
To hold your foot at all,
So use it on your ink,
It likes your blots, I think.

The teacher wrote it on the board, marked it "Save," and lowered the curtain over it.

During the writing period the curtain was raised, the children read the rhyme as a whole, and then the teacher erased all but the first line. The children closed their eyes and tried to see the picture. Then they compared the image with the writing on the board. This was repeated. The curtain was lowered. The children who did not write well went to the board and wrote the line; the others wrote on practice paper at their seats. The teacher raised the curtain, and the children compared their work with hers. Then the children at the board erased and wrote again; the children at the seats covered their copy with a blotter or folded it under, and wrote again. Each line was written in this way several times. Then the four lines were written by each child and compared with the teacher's copy. When each child was satisfied with his rhyme, he was given his gift sheet of paper, on which he wrote the rhyme with little help from the teacher. At the close of the lesson each child compared his work with his individual scale sheet.

TYPE LESSON IV—GRADE III

(A Record)

The children made butter at school. They expressed the desire to make a record of the butter-making process for their dairy booklets. During the writing period the children made this record:

"We made butter today. We put a cup of cream in a bottle. We shook the bottle for seven minutes. We said 'Come, butter, come.' When the butter came, we washed it. We added a half of a teaspoon of salt. We molded it. We ate it on crackers. It was good."

A child suggested a sentence. The teacher wrote it under the curtain, the children covering their eyes as she wrote. The children opened their eyes, and the curtain was raised and lowered several times. Then the children wrote the sentence, using pen and ink. This first sentence was indented because the complete record formed a paragraph. The curtain was raised, and the children compared their work with the teacher's.

After each sentence was written in this way, the complete paragraph was read silently by the child and compared with the paragraph on the board. Then he compared his work with his previous lesson and, if it showed improvement, placed it beneath his individual handwriting scale.

This lesson shows but one type of third-grade writing. Often the children work out a group composition, which is written on the board by the teacher, read silently by the children, erased, and then written by the children. Occasionally it is not erased but merely copied. The most valuable writing in the third grade is individual

composition work. Each child writes his own thoughts, the teacher spelling on the board any word that he needs. She quickly erases it, not allowing him to copy. His paper is corrected and re-written during a seat period.

SUGGESTIONS FOR THE MOTIVATION OF PRIMARY HANDWRITING

1. Labeling
   a) Pictures (Example: ball.)
   b) Articles in room (Example: colored-paper label placed on drawer of cupboard.)
2. Explanation
   a) Of illustrations (Example: "This is Jack"—to accompany a crayola illustration of Jack and the candlestick.)
   b) Of cuttings (Example: "I am the mother doll"—to accompany a paper doll cut from a magazine.)
   c) Of games (Example: A circle is made. A child goes inside of it. A child goes outside of it. The child outside of the circle must catch the child inside of the circle, etc.)
3. Letter-writing
   a) Invitations (Example: Come to our room at two-fifteen to help us celebrate Hallowe'en.)
   b) Letters for information (Example: The second grade wrote a simple letter to the Associated Charities asking the name of some worthy poor family which would enjoy a Thanksgiving basket.)
   c) Letters of thanks (Example: The first grade wrote to a former teacher thanking her for the book she sent them.)
   d) Letters to absent children.
      (1) Children who are ill.
      (2) Children who have moved away.
4. Record-making
   a) Of social events (Example: "Our Party.")
   b) Of school group projects (Example: "How We Made a Peep Show.")
   c) Of individual projects (Example: "How I Made a House.")
   d) Of home projects (Example: "How I Made My Boat Sail in a Tub.")

e) Of excursions (Example: "Our Trip to the Park.")
f) Of nature observations (Example: "The Robin.")
g) Of nature experiments (Example: "How I Took Care of the Tadpoles," explaining the use of the siphon to freshen the water.)
h) Of books read (Example: The child writes a few sentences about a book so that another child will want to read it.)
i) Of games for game booklets (Example: "How We Play Tag.")

5. Accounts
   a) School supplies
   b) Groceries for parties
   c) Midmorning lunch
   d) Milk used each day
6. Notices for bulletin board (Example: Today is my birthday. I am six years old—*Betty*.)
7. A daily newspaper
8. A yearbook of social events
9. Music (writing original words for original tunes)
10. Writing original stories for the weekly reading club

METHODS OF HEALTH INSTRUCTION IN THE SEVENTH GRADE[1]

CAROLYN HOEFER
Elizabeth McCormick Memorial Fund, Chicago

The curriculum of the lower grades carries the pupils in the modern school far enough so that there is no justification for much of the material which is commonly used in the upper grades. How widespread this waste of time has been is definitely pointed out in an investigation made by the writer, the results of which were published in the *Elementary School Journal*.[2]

With the awakening to the fact that the upper grades are open to the charge that they repeat in barren reviews subject-matter well known to the pupils, the public has demanded progress and not the mere marking of time. This in turn has brought about a reorganization of the courses of study in the upper grades and with it a demand for more mature material and material which has practical value. How this demand can be satisfied to some extent is shown in the following quotation:

> Through community civics, studies in science and industry, studies in community life, the study of community health problems, studies of home needs, domestic science, manual training, drawing, music, thrift training, manners and conduct, plays and games, as well as through a reorganization and redirection of the work in the older subjects—arithmetic, geography, language study, literature, history—the modern school aims to train pupils for greater social usefulness, to give them a more intelligent grasp of the social and industrial, as well as the moral and civic structure of our modern democratic life.[3]

[1] This is the fifth of a series of articles on classroom methods for increasing the efficiency of health instruction in the public schools contributed by the Elizabeth McCormick Memorial Fund. Reprints of these articles may be obtained from the Elizabeth McCormick Memorial Fund, 848 North Dearborn Street, Chicago, Illinois.

[2] Carolyn Hoefer, "Reviews in the Seventh and Eighth Grades," *Elementary School Journal*, XIX (March, 1919), 545–53.

[3] Ellwood P. Cubberley, *Public Education in the United States*, p. 369. Boston: Houghton Mifflin Co., 1919.

A study of the physiological and psychological characteristics of children at the age at which they are usually found in the seventh grade and a survey of the material which is ordinarily taught in this grade are necessary to determine the method and aim of health education. These characteristics have been the center of interest ever since Hall called attention to the usual changes which come with adolescence. He pointed out that physiologically there is an increase in the percentage of illness near the beginning of puberty, that the heart practically doubles in size during the development of puberty, which increase may be within one year or may extend over several years, and that children suffer from frequent headaches at this time; psychologically, imitation is at its highest point; children are anxious to stand well in the eyes of their playmates; boys are prone to have eating, drinking, and smoking contests, while girls "affect daintiness, become exceedingly discriminating in sweetmeats, bon-bons, summer drinks, etc."

The application of these teachings to the seventh grade was not made by Hall. It has become evident, however, that early adolescence, which coincides with entrance into the seventh grade, is a period of crucial importance and out of the studies stimulated by Hall's work has come that vigorous movement, variously named, which transforms the seventh grade from a place where mere reviews of elementary courses are carried on to a place where the enriched curriculum deserves to be classified as a part of secondary education.

Whether we call the seventh grade a part of the junior high school, or an intermediate school, or merely think of it as an enriched elementary school, it is especially fitting that a campaign for better health, which is of practical value to all, should find a prominent place in the new organization.

A. HEALTH PRINCIPLES TO BE EMPHASIZED IN THE SEVENTH GRADE

As a result of a study of some of the characteristics of children in the seventh grade, the principles recommended for special emphasis are as follows: (1) no reading in bed, (2) moderate amount of exercise and a corresponding amount of rest, (3) the value of a well-balanced diet, including such factors as the substitution of

milk for tea and coffee, a cooked cereal in the morning, fruit, and at least one vegetable in addition to potatoes every day, and the elimination of candy and other sweet foods except at the close of meals.

B. RECOMMENDATIONS FOR TEACHING HEALTH PRINCIPLES IN THE SEVENTH GRADE

The method of teaching health principles suggested for the seventh grade combines health education, literature, and grammar.

TABLE I

Course of Study	Literature															Grammar				
	Field, Eugene	Dickens	Roosevelt	Byron	Scott	Wordsworth	Bryant	Milton	Shelley	Carlyle	Poe	Whittier	Lowell	Longfellow	Letter Writing	Description	Synonyms and Antonyms	Outlining	Biographies	Dictation
Allentown, Pa.		X			X	X	X				X	X	X	X	X	X				
Chattanooga, Tenn.		X								X				X	X	X		X	X	
Chicago, Ill.		X	X		X							X	X	X	X	X		X	X	
Cleveland, Ohio				X	X		X				X				X	X	X			
Decatur, Ill.		X	X		X	X	X					X	X	X	X		X	X	X	
Erie, Pa.		X		X								X		X		X		X		
Harrisburg, Pa.		X											X	X	X	X		X		
Haverhill, Mass.		X				X	X		X			X	X	X	X	X	X	X		X
Indianapolis, Ind.		X			X	X		X	X	X	X	X								
Lansing, Mich.		X	X				X					X	X	X					X	
Memphis, Tenn.																		X	X	
New Orleans, La.	X	X			X				X		X									
Omaha, Neb.		X				X	X			X			X	X	X	X	X	X	X	X
Rochester, N.Y.		X			X						X	X		X	X	X	X	X	X	X
Spokane, Wash.		X	X		X		X							X						
St. Paul, Minn.		X					X					X	X	X						
Tacoma, Wash.					X				X			X			X					
State of Maine							X					X		X		X			X	
State of Oregon					X		X							X						
State of Pennsylvania			X				X					X		X	X	X	X	X		

Table I has been compiled to indicate some of the subject-matter found in this grade in a number of the latest revised courses of study. An X indicates that the author named at the top of the table, or the particular phase of grammar mentioned, receives

OUTLINE OF THE COURSE

(Incomplete plan)

Grammar	Literature	Health
1. Study of adjectives, especially descriptive 2. Distinction between synonyms and antonyms 3. Finer discrimination in use of words, especially applicable to special situation 4. Study of description—character sketch 5. Methods of research 6. Distinction between primary and secondary sources 7. Dictation exercise 8. Use of direct quotation. Writing of conversation 9. Oral composition. Reports on topics assigned 10. Study of outlining. Outlining facts emphasized in oral reports 11. Assignment of special topics. Use of reference books, index, card catalogue, current literature 12. Letter writing. Letter of Bryant, giving his habits of life as an example 13. Imitative type of composition. Essay. Study of Addison. Members of the class "silent observers" of violation of proper health habits 14. Exposition 15. Use of auxiliary verbs, *can*, *may*, *might*, etc. 16. Extemporaneous speech	1. Biography *a*) Eugene Field *b*) Charles Dickens *c*) Theodore Roosevelt *d*) Lord Byron *e*) Sir Walter Scott *f*) William Wordsworth *g*) William Cullen Bryant *h*) John Milton *i*) Percy Shelley *j*) Thomas Carlyle *k*) Edgar Allan Poe *l*) John Greenleaf Whittier 2. Recognition of portraits of famous authors—unlabeled 3. Study of the types of literature written by these men *a*) Was type of literature affected by health? 4. Study of history of foods as furnishing subjects for authors 5. Study of subjects and title of poetry and literature as result of the authors' habits of living 6. The essay. Study of Addison, *The Spectator* 7. Autobiography *a*) Study of *David Copperfield* *b*) Life of Theodore Roosevelt	1. Eugene Field *a*) Reading in bed *b*) Assimilation of food *c*) Too much pastry 2. Charles Dickens *a*) Frail constitution overcome by regularity of exercise *b*) Worry 3. Theodore Roosevelt *a*) Delicate health as a child improved by exercise and good habits *b*) Indulgence in sports *c*) Use of eyes; value of glasses for nearsightedness or eye defects 4. Lord Byron *a*) Unbalanced diet *b*) Irregularity of diet *c*) Insufficient food 5. Sir Walter Scott *a*) Effect of former illness overcome by regular exercise 6. William Wordsworth *a*) Value of living outdoors 7. William Cullen Bryant *a*) Regularity of all kinds of health habits. Value of cereals, fruits, and vegetables in diet *b*) Value of bathing 8. John Milton *a*) Effect of reading by moonlight — bad light 9. Percy Shelley *a*) Insufficient clothing in cold weather 10. Thomas Carlyle *a*) Eyestrain 11. Edgar Allan Poe *a*) General dissipation 12. John Greenleaf Whittier *a*) Overexercise

emphasis in the courses of study in the city named at the left of the table. The spaces which are left blank indicate that information was not obtainable. The statement was often made in the published curriculum that supplementary lists would be sent from time to time. It is very probable, therefore, that authors other than those checked are studied. However, the table gives a fair cross-section of the work as it is ordinarily found.

The outline of the course, which it is estimated will cover the work of two months, shows how the authors included in Table I can be used to emphasize health education. The method employed in following this outline may be illustrated by a number of lessons. It will be noted that in some instances assignments only are given and in other instances suggestions for the conduct of the class period.

INTRODUCTION TO BIOGRAPHICAL STUDIES

Ask the children to bring to class any pictures of the authors which they may have at home. Where the community is such that the pupils do not have access to this type of material, it is possible to obtain the pictures at the rate of two cents each from the Perry Pictures Company, Malden, Massachusetts. The catalogue numbers of those suggested in the outline are as follows: Eugene Field, No. 61; Charles Dickens, No. 96; Theodore Roosevelt, No. 132c; Lord Byron, No. 88; Sir Walter Scott, No. 85; William Wordsworth, No. 84; William Cullen Bryant, No. 5; John Milton, No. 76; Percy Shelley, No. 89; Thomas Carlyle, No. 92; Edgar Allan Poe, No. 33; John Greenleaf Whittier, No. 25.

If the names on the pictures are removed and a number given to each picture, additional interest is aroused in the effort to recognize them.

This material may be used as follows:

Lesson period.—"How many in the class like to solve puzzles or join a guessing contest at a party. I am going to see how well you can guess, and later an opportunity will be given to discover the success of your guess. But in order that you may understand better what we are going to do, I am going to ask you to think of someone whom you know—perhaps it is someone in your family, or your neighbor, or someone in this room—someone who is never

feeling well, always complaining about a headache, or always tired and perhaps not able to be at work. Now think of all of the adjectives you can use to describe this person—adjectives that can be used to describe any person not in good health. [Ask one of the pupils to write the adjectives on the board as the different pupils volunteer, going over them to eliminate those which are not applicable.]

"Now think of someone who is just the opposite. Think of the person who is always well, never complaining about his health, always at work. What adjectives would you use to describe that person?

"How many know what kind of adjectives we have used? You have suggested a large number of words which, although not identical, appear to be identical as far as our use here is concerned. What are such words called? Second, you have suggested a number of words which appear to be opposites. What name is applied to these words?"

Assignment.—"Find in your dictionary as many synonyms and antonyms as you can for the word 'healthy.' Also find any words or expressions which can be used to describe the feeling you may have after reading a poem or a story; for example, a story which makes you feel sad."

When these lists of words are brought to class, a little time may well be spent in emphasizing the finer discriminations in the use of words, emphasis for the present being placed upon those words used to describe the appearance of a person.

Assignment.—"A book of English synonyms, antonyms, and prepositions gives the following synonyms for 'healthy': 'hale, healthful, hearty, hygienic, salubrious, salutary, sound, strong, vigorous, well, and wholesome'; and the following antonyms: 'delicate, diseased, emaciated, exhausted, failing, fainting, and fragile.' By using the large dictionaries, find out which of these adjectives may be used to describe the appearance of a person."

BIOGRAPHICAL STUDIES

Lesson period.—"We are now ready to see how well you can guess. Before you are a number of pictures of well-known writers.

I am going to ask you to do two things: first, select the picture of a person whom you think from his appearance did not enjoy good health and write a paragraph telling why you chose that picture; second, select the picture of a person whom you think enjoyed the best of health and tell why you have chosen that picture. You may use any of the adjectives which you have found can be used to describe such persons or you may use your dictionary to find additional words. Remember that you are only guessing and that photographs are frequently 'touched up' to eliminate certain lines." (This phase of the work has three aims: (1) to interest children in the health question, (2) to initiate a desire on the part of the pupils to read the biographies of these men, and (3) to teach them to identify the pictures of famous men.)

Assignment.—Eugene Field. (Selected as an example of poor health resulting from eating pastry, poor assimilation of food, and reading in bed.) Ask the children to read the life of Eugene Field from as many sources as possible, bringing to class quotations about his health and methods of work. In order that the work may be uniform, have the children record their references as follows: (1) name of the author, (2) name of the book and the number of the volume used if there is more than one, (3) place of publication, (4) name of publisher, (5) date of publication, (6) the page upon which the material is found, and (7) the exact quotation which refers to health or method of work. The purpose of this assignment is threefold: (1) health emphasis, (2) acquainting the children with the life of Eugene Field, and (3) use of reference material, methods of recording reading, and the use of quotation marks.

For the purpose of illustrating just what can be done with this phase of the work, a few quotations describing the life of Eugene Field are given:

> He was at that time in his 33rd year. . . . . If Eugene Field had ever stood up to his full height, he would have measured slightly over six feet. But he never did and was content to shamble through life appearing two inches shorter than he really was. Shamble is perhaps hardly the word to use. . . . . It was simply a walk with the least possible waste of energy. It fitted Dr. Holmes' definition of walking as a forward motion to prevent falling. . . . . His legs always acted as if they were weary and would like to lean their master up against something.

Field's arms were long, ending in well-shaped hands, which were remarkably deft and would have been attractive had he not at some time spoiled his fingers by the nail-biting habit. His shoulders were broad and square, and not nearly as much rounded as might have been expected from his position in writing. It was not the stoop of his shoulders that detracted from his height, but a certain settling together, if I may so say, of the couplings of his backbone. He was large-boned throughout, but without muscles that should have gone with such a frame. . . . .

The photographs of Field are numerous, and some of them preserve a fair impression of his remarkable physiognomy. None of the paintings of him that I have seen do him justice. . . . . The best photographs only fail because they cannot retain the peculiar deathlike pallor of the skin and the clear, innocent china blue of the eyes.[1]

From 1889 Field's life was one long struggle with dyspepsia and inherited weakness which he persisted in aggravating by indulgence in those two twin enemies of health—pastry and reading in bed. During our intimate association I had exercised a wholesome restraint on his pie habit and reduced his hours of reading in bed to a minimum.[2]

On the eve of his departure for Europe in 1889 he wrote to a friend: "The attack of indigestion with which I am suffering began last June, resulting from irregularity in hours of eating and sleeping and from too severe application to work. The contemplated voyage will do me good I think."[3]

"What exceeding folly," he wrote to a friend, "was it that tempted me to cross the sea in search of what I do not seem able to find here—a righteous stomach?"[4]

Suggested questions for class discussion.—(1) What might Field's posture indicate? (2) Why should he not want to exert himself sufficiently to walk straight? (3) What is the meaning of the words, "He was large-boned throughout, but without muscles that should have gone with such a frame"? (Here is an opportunity to discuss the artistic side of health education—the attractiveness of a well-rounded body. Pictures of Greek art may be brought in for the discussion.) (4) Field's trip to Europe did not help his physical condition. Why not? (Bring out the fact that injuries to the body brought on by incorrect eating and eyestrain cannot be remedied so quickly.) (5) What does the nail-biting habit indicate?

[1] Slason Thompson, *Eugene Field, A Study in Heredity and Contradictions*, I, 220. New York: Charles Scribner's Sons, 1901.

[2] *Ibid.*, II, 139. [3] *Ibid.*, p. 142. [4] *Ibid.*, p. 159.

Assignment.—Divide the class into three groups. Assign to one group the topic, "What is meant by assimilation of food?" To the second group assign the topic, "Why did eating too much pastry injure the health of Eugene Field?" To the third group assign the topic, "What should Eugene Field have known about reading in bed"?

Lesson period.—Lead the children into a discussion of the misuse of the body. Discuss eyestrain, especially the strain produced upon the muscles of the eye when one is reading in an unnatural position.

Assignment.—"Imagine that you were Eugene Field's best friend and that you were visiting with him in his den, talking over old times. During the conversation he tells you that he is suffering from indigestion caused by eating too much pastry and that he has a bad habit of reading in bed. For the next lesson write the conversation which you think might take place under these conditions, including the arguments and warnings you would give. How would you try to influence him to change his habits of indulgence?"

Assignment.—Ask the children to bring in some of Field's writings. This assignment has two aims: first, to familiarize the children with his writings and, second, to see if the children can detect any difference in his earlier and later works due to the changes in his health. Bring out the point that Field had an obligation to perform to people in general. Raise the question as to his right to injure his health by incorrect living when he had a natural gift to make others happy through his writings. Do we have the same responsibility? Are we under obligation to live healthy lives not only for the personal advantage but for altruistic motives? Make a general survey of some of the habits of the children, especially those considered in the study of the life of Field.

Assignment.—"We are going to study the lives of a number of men, and we shall need different members of the class to act as specialists in the various fields of health so that we may be able to compare the different methods of work and the results of these methods." (Appoint those pupils to be specialists in a field where they need the particular phase of instruction. For example, the

child who reads constantly, straining his eyes, should be appointed to be one of the eye specialists. It may be well to appoint several eye specialists to compete with each other as in business—provided the competition is kept wholesome under the direction of the teacher—thus vying with each other in "prescribing" ways to better the health conditions of their patient—the author under discussion. This phase of the work necessitates study of the eye, and the child thus obtains much information. The eye specialists play an important part in the study of the lives of Field, Milton, and Carlyle. The children who take but little interest in proper and sufficient exercise will become athletic directors and take active part in the study of Field, Coleridge, who took insufficient exercise, Whittier, who "overexercised a naturally feeble constitution," and Wordsworth and Bryant, who lived outdoors constantly and were very regular about their exercise. The committee on diet will find interest in Lord Byron, whose illness was brought on by improper and irregular diet, in Eugene Field, and in Bryant, whose naturally weak constitution was greatly strengthened by proper food and regularity of meals. Hold each child responsible for his part of the work. It should be his duty to assemble all of the material brought up in class so that later all of the eye specialists working in a committee can make a report to the entire class.)

The purpose of such an assignment is threefold: (1) to give to each individual an opportunity to become informed in a field where there is special need of instruction, where health would be impaired because of lack of knowledge, (2) to teach responsibility in doing one special thing; and (3) to afford experience in working in committees—co-operation in small as well as in large groups.

It is impossible to give here a detailed account of each author, but a few general statements may be made. Dickens' interest in such sports and exercises as riding, walking, battledore and shuttlecock, American game of bowls, cricket, quoits, and bagatelle will lead to a discussion of these games as forms of good exercise, which may be followed by a discussion of the American games, classified in the order of the children's favorites. *My Father as I Recall Him*,[1] by Mamie Dickens, gives a detailed discussion of

[1] New York: E. P. Dutton & Co.

Dickens' attitude toward these games. The children will be interested in writing a letter to an English boy or girl on the subject, "My Classmate as I Recall Him."

One other quotation will be given because it represents the results of regular habits. The following letter written by William Cullen Bryant explains the quotation that Bryant "when over fourscore, was hale and fresh, and possessed 'a wonderful balance of faculties in a marvelous harmonious frame.'" This letter was written in 1871 and gives interesting particulars of his uncommonly simple and sensible mode of life.

I promised some time since to give you some account of my habits of life, as far at least as regards diet, exercise, and occupation. I am not sure that it will be of any use to you, although the system which I have for many years observed seems to answer my purposes very well. I have reached a pretty advanced period of life without the usual infirmities of old age, and with my strength, activity, and bodily faculties generally in pretty good preservation. How far this may be the effect of my way of life, adopted long ago, and strictly adhered to, is perhaps uncertain.

I rise early—at this time of the year, about half-past five; in summer, half an hour, or even an hour, earlier. Immediately, with very little encumbrance of clothing, I begin a sort of exercise, for the most part designed to expand the chest, and, at the same time, call into action all the muscles and articulations of the body. These are performed with dumb-bells—the very lightest—covered with flannel, with a pole, a horizontal bar, and light chair swung around my head. After a full hour, and sometimes more, passed in this manner, I bathe from head to foot. When at my place in the country, I sometimes shorten my exercises in my chamber, and, going out, occupy myself for half an hour or more in some work which requires brisk exercise. After my bath, if breakfast is not ready, I sit down to my studies until I am called.

My breakfast is a simple one—hominy and milk, or, in place of hominy, brown bread or oatmeal, or wheaten grits, and, in season, baked sweet apples. Buckwheat cakes I do not decline, nor any article of vegetable food, but animal food I never take at breakfast. Tea and coffee I never touch at any time. Sometimes I take a cup of chocolate which has no narcotic effect, and agrees with me very well. At breakfast, I often eat fruit, either in its natural state or freshly stewed.

After breakfast I occupy myself for a while with my studies, and then, when in town, I walk down to the office of the *Evening Post*, nearly three miles distant, and, after about three hours, return, always walking, whatever be the weather or the state of the streets. In the country I am engaged in my literary tasks till a feeling of weariness drives me out into the open air; and I go to my farm or into the garden and prune the fruit trees, or perform some

other work about them which they need, and then go back to my books. I do not often drive out, preferring to walk.

In the country, I dine early; and it is only at that meal that I take either meat or fish, and of these but a moderate quantity, making my dinner mostly of vegetables. At the meal which is called tea, I only take a little bread and butter, with fruit if it be on the table. In town where I dine later, I make but two meals a day. Fruit makes a considerable part of my diet, and I eat it at almost any hour of the day without inconvenience. My drink is water; yet I sometimes, though rarely, take a glass of wine. I never meddle with tobacco, except to quarrel with its use.

That I may rise early, I, of course, go to bed early—in town, as early as ten; in the country, somewhat earlier.

For many years, I have avoided in the evening every kind of literary occupation which tasks the faculties, such as composition—even to writing of letters—for the reason that it excites the nervous systems, and prevents sound sleep. . . . . I abominate all drugs and narcotics, and have carefully avoided everything which spurs nature to exertions which it would not otherwise make. Even with my food I do not take the usual condiments, such as pepper and the like.[1]

Such a letter as this suggests to the children that they write a friendly letter describing their modes of living. In addition to the experience given to the class, the letters should give to the teacher much desired information without the children being aware of the purpose.

These quotations will suffice to show the possibilities in using the lives of famous men as a guide to health instruction. It can also be seen that the study of each author can be adapted to the needs of the children and at the same time closely follow the required course of study. This material makes use of the fact that, as suggested by Dr. Hall, children delight in imitation and that they are "bemastered by the style of the great authors they have read." That they may carry further their desire to imitate, each one in the group might assume a name such as "Busy Thoughts of a Busy Fellow," or "The Quiet Advisor," or "The Silent Bracer," etc., and, in the style of *The Spectator* written by Addison, record either his own health habits or the habits of other children in the room during the school day. In this way, records may be kept of all of the children, and the motive will be of an altruistic nature.

[1] Andrew James Symington, *William Cullen Bryant.* New York: Harper & Brothers, 1880. Pp. 228–30.

Educational Writings

REVIEWS AND BOOK NOTES

The city superintendent and the board of education.—Much has been written about the principles and practices of school administration, but the purely legal aspects of the subject have up to this time received inadequate treatment. And yet efficiency in the management of city school systems, which increasing costs make so imperative, is to a considerable extent conditioned by the legal relationship existing between the superintendent and the board of education.

It is to set forth this relationship, both as to what it is and what it should be, that Mr. Morrison has prepared his book on the city school superintendent.[1] After pointing out that there are three theories relative to city school administration—(1) the theory that the superintendent is merely the executive of the board, (2) that he is the representative of the state in a local area, and (3) that he represents both the state and the locality—Mr. Morrison describes the scope and purpose of his book:

> It is with an examination and evaluation of these three fundamental theories in their application to city school administration that this study is concerned. Their expression in the law admits of varied and complicated relationships. . . . . While it is necessary to consider all of these problems in searching for the best legal organization of city school administration, it is the superintendent and the board of education that the American people will hold responsible for satisfactory returns from their investment in the public schools. The relationship between these two agents of the people and their specific responsibilities in the law, then, constitute the problem for this study [p. 8].

The author traces the historical development of the office of city superintendent in Connecticut and Ohio. He then examines the school laws now in force and the charters of a number of representative cities in the various states in order to determine the distribution of the legal authority between the superintendent and the board of education. A chapter is devoted to the judgment of professional and lay educational leaders as to what is a desirable distribution of this authority. Finally, attention is given to the relation of the legal status of the school superintendent to the general principles of administrative law.

[1] JOHN CAYCE MORRISON, *The Legal Status of the City School Superintendent.* Baltimore: Warwick & York, 1922. Pp. 162.

The treatment of the historical development of the city superintendency is somewhat technical and impresses one as being less thorough than the rest of the book. The legal aspects of the problem, however, are set forth clearly and in detail. Use is made of numerous tables and charts which make clear the legal relationship of the superintendent and the board. Most readers will perhaps be surprised to discover the marked tendency of the law to consider the superintendent in many ways the agent of the state and to bestow upon him considerable legal authority. The book is a distinct contribution to the literature of public-school administration and should meet with a wide use by students of the subject.

NEWTON EDWARDS

Intelligence tests.—The practical value of general intelligence tests has steadily increased with the refinement of the tests and the standardization of the methods of scoring the results. The attempts to utilize these tests for practical purposes in connection with the public schools have many times led to serious mistakes in dealing with individual pupils. The chief reason for the unsatisfactory employment of the intelligence tests as a means of properly placing pupils in school work has been the lack of training in the giving of tests to children of different school ages and of different levels of intelligence. Individuals with meager training in the field of intelligence testing and with little technique in administering the tests have been intrusted with an undertaking that demands scientific knowledge and a high degree of technical skill. In order to enable these individuals who are now in the field and those who are in training for this very important phase of educational work to become more proficient in the technique of giving intelligence tests and more thoroughly acquainted with the principles underlying the year intelligence scale, Dr. F. Kuhlman[1] has made a thoroughgoing analysis of the nature of mental tests and how they should be given. The purpose of Dr. Kuhlman's book is stated by O'Shea in the Preface as follows:

> Especial pains have been taken to present this revised Binet-Simon system in such terms and in such an arrangement of type, headings, and paragraphing that it will be clear to anyone who wishes to use it how it is to be employed, alike in respect to the method of administering the tests and the method of scoring the results. It will be possible for a teacher, a student of psychology, a parent, a worker in a juvenile court or in an institution for defectives or delinquents, to use the Kuhlman scale readily and accurately after reading this volume. The use of the scale does not require an extended knowledge of the sciences, especially psychology, upon which it is based [pp. 2–3].

Chapters ii, iii, and iv discuss in a thorough manner the general principles of the year scale, the conduct of an examination, and the directions for giving tests. These chapters are of most value to educational workers in general,

[1] F. KUHLMAN, *A Handbook of Mental Tests*. Baltimore: Warwick & York, 1922. Pp. 208.

but they require careful study to be of practical value to the ordinary student of mental tests. The discussions are free from technical terms and are couched in simple, direct language that makes them readable and possible of interpretation by individuals who are not specialists in this field. Chapter v, which discusses the individual tests in the light of comments that have been made by specialists in the field of intelligence tests, will be of little practical value to the ordinary student of mental tests. It will be of great value, however, to the student who is specializing in this field. The Appendix presents a very practical and valuable table of intelligence quotients.

This book should be of help to students of mental tests, and it should prove an invaluable guide to the practice of giving intelligence tests to school children. It is not a cure-all, however, for defective technique in administering tests. The editor's claim that "it will be possible for a teacher, a student of psychology, ... to use the Kuhlman scale readily and accurately after reading this volume" is a bit ambitious. It will require much thorough study on the part of any of these individuals to read the book understandingly, and it will require much more practice in following its instructions before such individuals will be able to use the scale accurately. Such attainment is made possible by the book, but very serious effort must be expended in reaching the desired end.

H. W. NUTT

A city school survey.—The report of an inquiry concerning the conditions and policies under which a city school system is conducted holds at least the element of interest which attaches to the description and appraisal by experts of the situations and practices which are more or less peculiar to the system. The form in which the report is presented, however, has much to do with the extent to which the material is of general value to persons engaged in different types of educational work. The latest of the surveys made under the direction of the Bureau of Education is reported in a brief bulletin[1] containing a digest of the conclusions and recommendations of the survey staff. Sufficient details are given to supply a background for the statements and recommendations concerning the principal features of the system. In the case of some of the special phases of the work of the schools, the report includes merely a summary of the suggestions of the survey staff.

The section of the report dealing with the organization and administration of the school system is interesting both because of the conditions described and as an example of effective and wholesome procedure in recommending that radical changes be made in fundamental features of the system. It was found that the independent school district of Wheeling included less than one-third of the area of the municipal corporation but comprises seven subdistricts and was directed by a board of twenty-one members. The affairs of the board

[1] *Educational Survey of Wheeling, West Virginia.* Bureau of Education Bulletin No. 28, 1921. Washington: Department of the Interior. Pp. 53.

were administered by ten standing committees, the superintendent having little to do with even so specialized a function as that of selecting teachers. Apparently the community was in general indifferent toward matters affecting the welfare of the schools. In order that an effective administration may be set up, the report asserts that certain specific steps must be taken:

1. Eliminate the subdistricts, except for attendance purposes.
2. Eliminate the local commissionerships, and have board members elected at large.
3. Provide a small board of men and women who will be beyond the reach of local, petty, personal, and political influence.
4. The board should delegate responsibility and authority to its chief executive, provide the necessary means, demand results, and then stand aside and let the superintendent and his organization get results.
5. The board should adopt impersonal ways of checking up results, efficiency, and economy.
6. The board should take the community into its confidence fully, at all times, and keep the public informed as to policies, needs, and results [p. 12].

Since certain of these changes involve legislation, the basic principles on which a legislative program should be formulated are presented in the form of a summary of the things to be provided for in the reorganization. In this summary, a clear distinction is drawn between matters which are subject to legislative action and those which should be taken care of by action of the administrative board, and the relation of the board to the chief executive and other officers is defined by a classification and enumeration of the principal powers and duties of each. It is significant to note that a type of reorganization following the lines suggested in this program was approved by the board and indorsed by important associations of the city within a short time after the report was made.

Other sections of the report deal with finance, the school plant and a needed building program, high-school organization and curricula, the elementary schools, and certain special subjects and activities of the educational program. While the omission of statistical and descriptive material will be regretted by those whose interests prompt them to seek such data, the compact form of the digest of conclusions and recommendations of the survey staff makes the report a convenient handbook on certain phases of school administration.

N. B. HENRY

Vocational guidance.—The problem of civics instruction and occupational study courses for boys and girls in the upper grades of the elementary school has attracted a great deal of attention, and, while there is nothing approaching common agreement either as to content or as to method of treatment, all are agreed that young people of this age should begin to think effectively about opportunities for and the requirements of service in the community.

A recent text[1] intended for use with sixth- or seventh-grade pupils is so arranged as to present for reading and discussion topics which bear upon fundamental community service co-operation and at the same time lend themselves to a treatment of the matter of occupational choice without forcing this issue beyond the point of natural interest and appeal.

The significance of training is kept before the pupils through the discussion of such topics as "Education for Better Service" and "Preparing for Promotion." A rational basis is provided for the consideration of occupational choice through an analysis of problems relating to co-operation between communities and individual community service, and by a practical discussion of "The Joy of Work." At the close of each section is presented a list of things to do and talk about. The problems and topics suggested are such as call for personal investigation and reaction on the part of the individual pupil.

The book is interestingly written and well illustrated. It should prove especially helpful to teachers or counselors dealing with upper-grade or junior high school pupils, not necessarily as a text but as a basis for occasional conferences. It should, however, be available for general class use.

E. T. FILBEY

Improving thinking.—The emphasis in most of the literature relating to the thought process has been upon such topics as the nature of thinking, its physiological and psychical aspects, the mental processes of thinkers, and the more purely psychological nature of thinking. Interesting and valuable as this is, it is not nearly so important to the practical schoolman as the application of these principles to the more pressing problem of improving the function. Especially is this true because many of the teachers upon whom falls the burden of trying to improve thinking have not acquired a sufficient professional background to understand the more technical literature.

It is to meet this demand that Mr. Boraas has recently prepared a book[2] which deals in a comprehensive manner with the problem of developing a superior type of thinking in the schools. The author has in his Preface thus summarized the reasons for the book:

> The main purpose of this book is to discover the principal types of thinking which are required in everyday life, and to indicate practical ways and means for their development in the ordinary school [p. vi].

After pointing out the importance of thinking and showing how it produces efficiency, the author gives the following types of thinking: "Individual Judgment," "Co-operative Thinking," "Thinking as Others Think," "Initiative in Thinking," "Imaginative Thinking," "Solution of Everyday Prob-

[1] ISAAC DOUGHTON, *Preparing for the World's Work.* New York: Charles Scribner's Sons, 1922. Pp. 223. $1.00.

[2] JULIUS BORAAS, *Teaching to Think.* New York: Macmillan Co., 1922. Pp. xi+289.

lems," "Solving Long Problems," and "Critical Thinking." Each type of thinking is selected and illustrated from everyday experience. Schoolroom procedure is then examined to see what provision has been made for training in this type of thinking. This is followed by suggestions of practical means of providing the required training in the regular school work. Each chapter closes with a group of thought questions based upon its subject-matter.

The book is written for teachers with little or no professional training but will be of value to all teachers who are interested in getting better results from their teaching. It is written from the practical rather than the theoretical point of view, but it touches a surprisingly large part of the material usually found in the professional literature of learning and thinking. The various types of thinking overlap widely; for instance, all of the types might be considered as a part of problem-solving, and yet the overlapping is probably no more serious than would be the drawing of too fine distinctions. The particular merit of the book consists in its attempt to reduce the literature of thinking to schoolroom applications.

ERNST E. WELLEMEYER

Children's selection of reading books.—Of the experimental studies in reading, some are concerned with the mental processes involved in learning to read, some with the problem of measuring results, some with the standardization of content material, and some with the mechanics of book construction. An investigation of the type last mentioned has recently appeared as one of the Johns Hopkins University Studies in Education. In this monograph[1] a report is given of the relationship between the physical appearance of a book and its selection by children.

In order to provide a suitable body of material for the experiment five stories were selected, each of which had appeared in five different editions which varied in respect to size, binding, type of illustrations, and amount of content. The stories used were: "Cinderella," "Sleeping Beauty," "Black Sambo," "Peter Rabbit," and "The Night before Christmas." The method of conducting the experiment was to have the teacher read a portion of the story, stopping at an interesting point. The pupils were then shown the five different editions containing the selection, from which they were to choose one for their own use in finishing the story. They were asked to make a choice on the basis of the external appearance of the books and later to make a second selection on the basis of the content of the different editions. The experiment was carried out with children selected from five schools representing different types of population. By combining the results from the five groups of children, it was possible to express quantitatively the effects of size, binding, illustrations, etc., as well as to note the sex and grade differences which appeared.

[1] FLORENCE EILAU BAMBERGER, *The Effect of the Physical Make-up of a Book upon Children's Selection.* Johns Hopkins University Studies in Education, No. 4. Baltimore: Johns Hopkins Press, 1922. Pp. viii+162. $2.00.

On the basis of the data presented, the author draws a series of significant conclusions, of which the following are representative:

> Size appears to be a factor in book selection. The small diminutive volume does not appeal as strongly as a larger book. The size most acceptable to the children in the primary grades appears to be about seven and one-half inches long by five inches wide and one inch thick. There needs to be further experimenting, however, to decide if a larger book would be more acceptable than this. These experiments had no book larger than the above. . . . .
>
> The internal arrangement of books also influences choices. (*a*) Numerous illustrations make a book acceptable to children. Twenty-five per cent of the book space seems the minimum amount of space to be devoted to pictures to make a book acceptable for little children. Large, full-paged pictures are preferred to smaller ones inserted irregularly in the text. (*b*) Colors preferred by the younger children are rather crude and elementary, having a high degree of saturation and a great deal of brightness. Older children gradually grow into a preference for softer tints and tones. (*c*) Humor and action in pictures make an appeal to primary children. (*d*) Pictures that have story-telling qualities have a high attraction. (*e*) A fair number of stories in a familiar field attract children to a book [p. 131].

The results of the investigation indicate clearly that the external appearance of books exerts a marked influence upon children's selection. In the light of this fact, the purchase by the school of editions which are most stimulating to the interests of a child becomes an important matter. In order to facilitate the selection of books which make a strong appeal to children, a score-card has been devised by which books may be rated as to physical make-up. Several sample ratings are given which make the use of the score-card clear to the reader.

From the standpoint of technique, the investigation has been carefully planned. The report is well organized and is well supported by graphic illustrations. The value of the pupils' choice might have been considered somewhat more fully. Their choice as to length of line, for example, is plainly to be subordinated to the requirements of the hygiene of eyesight. One raises the question as to whether there may not be similar conflicts in regard to the size and binding of the book. How significant is the pupil's choice? The factual evidence from the experiments is clearly and logically presented. A further elaboration of the interpretative discussion would be desirable.

G. T. BUSWELL

Community civics for the seventh and eighth grades.—The realization that much can be done in the elementary grades of the school in creating interest in social problems and in supplying knowledge of social activities and agencies has caused emphasis to be placed on civics instruction in these grades. This emphasis on civics instruction has resulted in a demand for material which can profitably be used in the work. The fault with many, if not most, of our elementary textbooks on civics is that they do not supply the pupils with interesting material and especially with material which is of vital concern to them.

The purpose of a recent writer[1] on community civics has been to supply the teachers of the seventh and eighth grades with material which meets the interest and attainments of the pupils of these grades. The author has realized in preparing the book that it will not apply to all classes alike and that the teacher will need to adapt it to the special needs of the class.

The content of the book is presented in fourteen chapters. In chapter i the author develops the community idea by emphasizing the interdependence of people; the relation between different communities such as the home, the school, and the state; the beginning and development of the city; the different kinds of communities; the acquirement of citizenship; and the ways in which the community helps the citizen. Chapter ii is devoted to a discussion of the conditions necessary for good health, the purification of air and water, the disposal of waste matter, the feeding of a city, living conditions at home, the promotion of individual health, and keeping the community clean. Other chapters deal with "Training the Growing Citizen," "Providing Recreation," "Planning the Community," "Laying up Wealth," "Promoting Right Living," "American Ideas about Government," "Law-making and Law-enforcing," "Voting," and "Supporting the Government." The book contains many impressive illustrations, and at the end of each chapter a list of topics is presented whereby the subject may be further developed and related to the local community. Those who are acquainted with Mr. Hughes's book on community civics for high schools will find this book very similar in organization.

The distinctive merit of the book rests on the topics which the author has included in his discussion. They are undoubtedly of a sort that will not only interest the pupil but will awaken in him the spirit of community service. While the book may be highly commended in choice of topics and in adaptability to the seventh and eighth grades, the teacher must use wisdom in fitting the book to her special needs and in teaching the subject not merely by the question-and-answer method and by requiring themes, but through actual participation in life's activities.

JAMES VAUGHN

New encyclopedia.—The function of a set of reference encyclopedias in a school library is clearly recognized. The value of such books, however, is conditioned by their recency of publication, scope, accuracy, and literary style. The radical changes and advancements brought about by the world-war have emphasized the need of a comprehensive postwar encyclopedia. This need has been met by the publication of an eight-volume reference work[2] by F. E. Compton and Company.

[1] R. O. HUGHES, *Elementary Community Civics*. Boston: Allyn & Bacon, 1922. Pp. iii+449.

[2] *Compton's Pictured Encyclopedia*. Chicago: F. E. Compton & Co., 1922. Vols. I–VII. Pp. 3,842. Vol. VIII in preparation.

The aim of the editors is concisely stated:

> Our governing purpose throughout this work has been fourfold: (1) scholarly accuracy and breadth of view; (2) interesting treatment, obtained by focusing the attention on the most striking, salient, and picturesque aspects of each topic discussed; (3) simplicity, clearness, and directness of language, without insulting the reader's intelligence by trying to "write down" to him; (4) wealth of illustrations which visualize and dramatize the text [I, xii].

The general character of the encyclopedia may be inferred from the high standing of the editorial staff. Dean Ford, of the University of Minnesota, is the editor-in-chief, while the position of managing editor is filled by the historian, Samuel B. Harding.

These volumes are especially well adapted to the needs of the school. They represent a compromise between the style of the expensive, many-volumed, and technically written encyclopedias and the light, and frequently inaccurate, treatment of the popular magazine. All of the material for this encyclopedia has been written by specialists, then re-written in a more popular style by a staff of journalists, and finally checked by the original writers in order to make sure that the popularizing of the articles has not destroyed their scientific accuracy. The result is a very readable body of material for both the school child and the adult.

The plan of the eighth volume, which is soon to be issued, is novel and has considerable merit. In this volume will be combined the functions of an ordinary index and a miniature work of reference. This will make an excellent source for quick reference, as well as a guide to further reading when more information is desired.

The art work and the mechanical construction deserve special mention. The careful selection of pictures and illustrations is particularly adapted to school use, while the maps are excellent in clearness and in choice of detail. The non-glaring paper which is used is an item worthy of comment.

As an inclusive work of reference for school use this publication is an outstanding contribution. The fact that it is entirely new and modern, together with its departure from the traditional academic style of treatment, makes it very desirable for the classroom or library.

A new series of arithmetic texts for elementary schools.—The present need in arithmetic teaching is for a text in which the material is carefully organized in steps of progressive difficulty with enough drill upon each step to insure its mastery at the time presented. Further, there must be enough interesting, live material included in the text to offer many opportunities for using the tools of arithmetic in a variety of situations.

It is to meet these needs that a new set of three texts has been prepared by Mr. Anderson.[1] The purpose of each book is clearly stated in the Preface.

[1] ROBERT F. ANDERSON, *The Anderson Arithmetic.* Book I, pp. xiv+274; Book II, pp. vi+282; Book III, pp. vi+312. Boston: Silver, Burdett & Co., 1921.

The purpose of Book I is to organize the subject-matter of the first four years of school so that the child will acquire skill in the use of the fundamental processes, simple measures, and easy fractions. Book II, intended for use in the fifth and sixth grades, stresses the fundamental operations with particular attention to the more difficult processes. Book III, to be used in the seventh and eighth grades, aims to review and perfect the work with integers, common fractions, and decimals, to apply the processes of arithmetic to problems of interest to the children, and to give much problem material in which are involved the arithmetical requirements common to many vocations.

With these purposes in mind, the author has presented a variety of carefully organized material in such a way that the text may, if the teacher chooses, be used as a means of instruction or it may be used as supplementary material from which selected exercises for drill and practice may be drawn. The fact that the books are addressed directly to the children, in language for the most part within their comprehension, is an advantage.

Two features of Book I might with profit be carried over into the other books of the series. The first is a short chapter entitled "Suggestions to Teachers," in which the aims for the first four grades are noted and the topics to be mastered in each of the first four years are definitely set forth. The second feature, which is addressed to the children, is an occasional list of things they should be able to do upon completing a given section of the book.

ADELINE SHERMAN

UNIVERSITY OF CHICAGO ELEMENTARY SCHOOL

Practical English for grammar grades and junior high schools.—The growing tendency of the curriculum is to provide a practical course of instruction which will prepare the pupil to participate most efficiently in the duties and activities of life. Increasing emphasis is being placed upon the correlating of fundamental subjects with the material presented in content courses, thereby providing both specific and general training. A very striking example of a broad course of instruction in English is presented in a recent book[1] by Mildred B. Flagg, designed for use in the grammar grades and in junior high schools. The book is the outcome of five years of experience in the teaching of English by the project method. Each unit of material presented has been tested many times in various English classes.

> The paragraph has been made the subject of special study; and letter-writing, the making of reports, memory training, the use of reference books, telephone conversations, verse-making, dramatization, and the study of literary masterpieces have received much attention. Provision has been made for only enough technical grammar to furnish a touchstone by which the pupil is able to understand what he reads and to correct his own faulty habits of speech [pp. viii–ix].

[1] MILDRED B. FLAGG, *Community English*. New York: Macmillan Co., 1921. Pp. xvi+266.

Each exercise has some practical value for the pupil, the illustrations and selections bearing a direct relation to the essential facts of life. The book provides a far greater amount of material than any teacher or class can possibly use, thus enabling the instructor to choose material which will best serve the needs of the individual pupils or community.

The play spirit is made a salient feature of the classroom activity. This helps to eliminate lost energy and mind-wandering and enables the pupil to lose sight of the fact that he is gaining knowledge through the interest which he manifests. The book contains a wide selection of material for instruction in practical English by the project method. While providing a course in English with a practical content, the book does not neglect the rudiments of speech.

W. D. BOWMAN

The measurement of intelligence.—The fact that the testing of intelligence has been adopted with unrestrained enthusiasm by some teachers while others have seen in it only a movement to be condemned emphasizes the need of a clear, critical statement of the values and uses of intelligence tests. Such a statement has appeared in the current yearbook[1] of the National Society for the Study of Education.

The content of the book, which consists of a series of studies by twelve contributors, is described in the following statement from the Preface:

> For the purpose of correcting some of these errors and misunderstandings and of explaining in a clear and accurate manner the theory, nature, and practical use of intelligence tests, the present yearbook has been compiled. It is composed of two parts. . . . .
>
> Part I attempts to show just what is to be understood by the term "general intelligence," to indicate how this may be measured, and to show the steps by which mental tests have grown up and some of their most essential characteristics. Further, the attempt is made to acquaint the teacher and administrator with the correct methods of studying and evaluating the results of mental testing. A descriptive bibliography is added which furnishes information in regard to the various group tests of intelligence now available. A brief chapter is added on the importance of measurement in education generally.
>
> Part II takes up in some detail the administrative uses of intelligence tests in various grades of instruction, beginning with the primary grades and ending with the college and university. In the discussions in this part of the book the purpose is to set forth in some detail the procedure and results of mental testing as far as they relate to matters of instruction and administration [p. viii].

The book not only crystallizes a more scientific attitude toward intelligence testing but also provides specific answers to a number of questions. Dr. Rugg

[1] *Intelligence Tests and Their Use.* Twenty-first Yearbook of the National Society for the Study of Education. Bloomington, Illinois: Public School Publishing Co., 1922. Pp. ix+288. $1.50.

gives an excellent concise presentation of the fundamentals of statistical methods. Professor Whipple's annotated list of group tests supplies in convenient form the answers to many inquiries regarding the character of different tests. The elaborate use of intelligence tests in a city school system is exhibited in an article describing the work of the Detroit Psychological Clinic. Other writers describe the use of mental tests in the fields of elementary, secondary, and higher education.

On the whole, the book serves the excellent purpose of bringing together in an easily available source a large amount of first-class material relating to the use of intelligence tests.

CURRENT PUBLICATIONS RECEIVED

GENERAL EDUCATIONAL METHOD, HISTORY, THEORY, AND PRACTICE

BROOKS, THOMAS DUDLEY. *The Lay Element in the Intermediate Unit of State School Systems.* Waco, Texas: Baylor University, 1922. Pp. 42.

BURDGE, HOWARD G. *Our Boys.* Albany, New York: Military Training Commission, Bureau of Vocational Training, 1921. Pp. viii+345.

EIKENBERRY, W. L. *The Teaching of General Science.* Chicago: University of Chicago Press, 1922. Pp. xiii+169. $2.10.

MONROE, WALTER S. *The Illinois Examination.* Bureau of Educational Research Bulletin, No. 6. Urbana, Illinois: University of Illinois, 1921. Pp. 70. $0.50.

RICHARDSON, WILLIAM LEEDS. *The Administration of Schools in the Cities of the Dominion of Canada.* Toronto: J. M. Dent & Sons, n.d. Pp. xviii+315.

VAN DENBURG, JOSEPH K. *The Junior High School Idea.* New York: Henry Holt & Co., 1922. Pp. 423. $1.50.

BOOKS PRIMARILY FOR ELEMENTARY-SCHOOL TEACHERS AND PUPILS

BARNUM, MADALENE D. *School Plays for All Occasions.* Newark: Barse & Hopkins, 1922. Pp. 186.

HALL, NEWTON MARSHALL. *Tales of the Far-off Days.* Boston: Ginn & Co., 1922. Pp. x+274. $0.84.

Public School Methods. Chicago: School Methods Co., 1921 (revised). Vols. I–VI.

SCALES, LAURA W. L. *Boys of the Ages.* Boston: Ginn & Co., 1922. Pp. vi+210.

STOUT, A. B. *Gardening.* Yonkers-on-Hudson, New York: World Book Co., 1922. Pp. xv+354. $1.60.

WINSLOW, LEON LOYAL. *Elementary Industrial Arts.* New York: Macmillan Co., 1922. Pp. xiv+335.

PUBLICATIONS OF THE UNITED STATES BUREAU OF EDUCATION AND OTHER MATERIAL IN PAMPHLET FORM

Proceedings of the Twenty-sixth Annual Meeting of the Association of Colleges and Secondary Schools of the Southern States. Durham, North Carolina: Seeman Printery, 1922. Pp. 151.

Recent issues of the Bureau of Education:

Bulletin No. 30, 1921—*Salaries of Administrative Officers and Their Assistants in School Systems of Cities of 25,000 Inhabitants or More.*

Bulletin No. 32, 1921—*The Reorganization of Mathematics in Secondary Schools.*

Bulletin No. 45, 1921—*School Grounds and Play.*

Bulletin No. 48, 1921—*Educational Directory, 1921–22.*

Bulletin No. 51, 1921—*Statistics of Nurse Training Schools, 1919–20.*

Bulletin No. 52, 1921—*Record of Current Educational Publications.*

Bulletin No. 3, 1922—*Preparation of Teachers of the Social Studies for the Secondary Schools.*

Home Economics Circular No. 11—*Equipment and Rooms for Home Economics Departments.*

Sixth Yearbook, National Association of Secondary School Principals, 1922. H. V. Church, J. Sterling Morton High School, Cicero, Illinois, Secretary. Pp. xlv+215.

MISCELLANEOUS PUBLICATIONS

BOGARDUS, EMORY S. *A History of Social Thought.* Los Angeles: University of Southern California Press, 1922. Pp. 510.

Compton's Pictured Encyclopedia. Chicago: F. E. Compton & Co., 1922. Vols. I–VII.

MACGARR, LLEWELLYN. *The Rural Community.* New York: Macmillan Co., 1922. Pp. xv+239.

SEERS, A. WADDINGHAM. *The Earth and Its Life.* Yonkers-on-Hudson, New York: World Book Co., 1922. Pp. 208. $1.20.